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THE PORTS OF CHARLESTON AND GEORGETOWN, SC

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Port Series No. 13

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CORPS OF ENGINEERS
U. S. ARMY

PORT SERIES NO. 13
REVISED 1980

THE PORTS OF CHARLESTON AND GEORGETOWN, SC

PREPARED BY
THE WATER RESOURCES SUPPORT CENTER

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1980

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This report supersedes a similar report revised in 1970

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*Under revision.

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I N T R O D U C T I O N

This report on the Ports of Charleston and Georgetown, South Carolina, is published as No. 13 of the Port Series. It supersedes a similar report revised in 1970.

The reports in the Port Series cover the principal United States coastal and Great Lakes ports, and are compiled and published by the Port Facilities Branch, Water Resources Support Center, Corps of Engineers, U.S. Army, Kingman Building, Fort Belvoir, Virginia 22060, under authority of Section 7 of the River and Harbor Act of July 19, 1918, Section 500 of the Transportation Act of February 28, 1920, and Section 8 of the Merchant Marine Act of June 5, 1920.

Acknowledgment is made of the valuable assistance given by the District Engineer, U.S. Army Engineer District, Charleston, South Carolina, facility operators, port organizations; shipping and transportation companies; state and city officials and other individuals; in the compilation of data for this report.

Unless otherwise stated, the information contained in this report was current upon completion of field survey in May, 1980. Additional revised data have been included through July, 1980.

METRIC CONVERSION TABLE

Section 3 of Public Law 94-163, the Metric Conversion Act of 1975, declares that the policy of the United States shall be to coordinate and plan the increasing use of the metric system in the United States.

As an initial step, in accordance with the Metric Conversion Act of 1975, this Metric Conversion Table is included in this Port Series Report.

MULTIPLY	BY	TO OBTAIN
Inches	2.54001	Centimeters
Feet	0.304801	Meters
Miles, statute	1.60935	Kilometers
Square Feet	0.0929034	Square meters
Acres	0.404687	Hectares
Pounds per square foot	4.88241	Kilograms per square meter
Tons, short	0.907185	Metric tons
Tons, long	1.01605	Metric tons
Gallons	3.78543	Liters
Degrees, Farenheit	5/9 (F-32)	Degrees, Celsius
Barrels, oil	1.58988	Hectoliters
Bushels	0.0352391	Cubic meters

THE PORT OF CHARLESTON, SC

PORT AND HARBOR CONDITIONS

LOCATION AND GENERAL DESCRIPTION

The Port of Charleston, SC, is on a peninsula at the confluence of the Cooper River on the east and the Ashley River on the west. The rivers flow into the bay known as Charleston Harbor. The port is 79 nautical miles southwest of Georgetown, SC, and 102 nautical miles northeast of Savannah, GA.

The deepwater entrance from the ocean to the port is via a dredged channel between 2 stone jetties lying outside Sullivans Island on the northeast and Morris Island on the southwest. Fort Moultrie and the town of Sullivans Island are located on the northerly side of the entrance, and Fort Sumter is on a small island off the southwest side of the channel inside the jetties.

The port area included in this report extends from the Atlantic Ocean to the Consolidated Railroad Bridge at Childsbury via the Cooper River and Town Creek, and West Branch Cooper River; the Ashley River to a point below East Marsh Island; the Shem Creek to the U.S. Highway 17-701 Bridge; up the Shipyard River to the MACALLOY CORPORATION Wharf; Clouter Creek; up the Wando River to Cainhoy, SC; and Johns Island on the Stono River. The port's principal waterfront facilities are located along the west side of the Cooper River and Town Creek.

Shem Creek empties into the east side of Charleston Harbor at the town of Mount Pleasant, opposite the lower end of the city of Charleston. Shutes Folly Island lies between Charleston and Mount Pleasant. Approximately 2.5 miles above the mouth of the Cooper River, 2 channels lead around Drum Island: Town Creek, between the island and the city waterfront; and Cooper River on the east side of the island. Shipyard River is a tidal tributary entering the west bank of the Cooper River about 0.7 mile beyond the upper end of Drum Island. Clouter Creek branches off Cooper River opposite Charleston Navy Base and rejoins the Cooper River

opposite and above Goose Creek. The Wando River empties into the Cooper River northeast of Drum Island. Cainhoy is a town on Wando River about 10 miles above Drum Island.

The United States Navy dredged a 35-foot channel with varying widths between the mouth of Goose Creek and a point about 4.8 miles upstream.

Charleston Harbor forms part of the route of the Atlantic Intracoastal Waterway. One section of the waterway extends southwestward from Winyah, SC, to Charleston Harbor through the Sullivans Island Narrows, and another section extends from the harbor by way of Wappoo Creek, a tributary of the Ashley River, southwestward to Beaufort and Port Royal, SC.

HARBOR AND CHANNEL IMPROVEMENTS BY THE UNITED STATES

Charleston Harbor and the Ashley and Shipyard Rivers have been under improvement by the Federal government under various projects and modifications since the original projects were adopted.

The three existing projects for improving the waterways and channels within the port area are described as follows:

Charleston Harbor

The existing project, authorized by the River and Harbor Act of June 18, 1878, and by subsequent acts, of which the latest were dated October 17, 1940, March 2, 1945, September 3, 1954, and July 14, 1960, provides for the following work:

> A channel for commercial purposes 35 feet deep and 1,000 feet wide from the sea to the inner end of the jetties, thence 600 feet wide to the U.S. Naval Shipyard, and thence 400 feet wide to the mouth of Goose Creek, a total distance of 21.9 miles, with a turning basin 700 feet wide at the Port Terminals; and for a channel 35 feet deep and 500 feet wide through Town Creek; for a channel in Shem Creek 10 feet deep and 110 feet wide from a flared entrance from Hog Island Channel to and including a turning basin 130 feet wide and 400 feet long with the

upper end 250 feet long upstream from the Mount Pleasant public wharf, thence 10 feet deep and 90 feet wide to the bridge on U.S. Highway No. 17; and for maintenance of a channel 10 feet deep and 90 feet wide in Hog Island Channel from Shem Creek to the Atlantic Intracoastal Waterway. The project also includes the maintenance of 2 entrance jetties of stone on log mattress foundation; the north jetty is 15,443 feet long and the south jetty, 19,014 feet long; the distance between their axis at the outer end is 2,900 feet. The project also provides for the following work which was authorized to be prosecuted only as found necessary in the interest of national defense: a 40-foot channel, 1,000 feet wide from the sea to the inner end of the jetties, thence 600 feet wide to the south pier at the Navy Yard, and then 1,000 feet wide to the Commandant's wharf; and an anchorage area 30 feet deep between Castle Pinckney and Fort Moultrie.

The project has been completed except for the 40-foot, national defense project and a part of the anchorage basin. The Water Resources Development Act of October 22, 1976 has authorized the Phase I Design Memorandum stage of Advance Engineering and Design for deepening of the 35-foot channel to 40 feet (42 feet in the ocean bar and entrance channel) from the 42-foot ocean contour to Goose Creek, a total distance of 26.9 miles, construction of one turning basin, modification of existing turning basins, deepening and modification of the anchorage basin, and deepening Shipyard River to 38 feet.

Shipyard River

The existing project, authorized by the River and Harbor Act of July 3, 1930, and by subsequent acts, of which the latest is dated March 2, 1945, provides for the following work:

> A channel 30 feet deep at mean low water and 200 feet wide, widened to 300 feet at the entrance from deep water in Cooper River to the vicinity of the plant of Airco Alloys and Carbide Company, with a turning basin 30 feet deep

opposite the Gulf Oil Corp. terminal, and another turning basin 30 feet deep at the upper end of the project with a flared entrance; total length of the project is 1.2 miles. The project was completed in June 1951.

Ashley River

The existing project, authorized by the River and Harbor Acts of July 25, 1912 and August 26, 1937, provides for:

> A channel 30 feet deep at mean low water and 300 feet wide from the mouth to the Standard Wharf, a distance of 7.4 miles; suitably widened at bends and at head of the improvement; and for maintenance, to a depth of 12 feet and a width of 100 feet from the approach channel to the municipal yacht basin. The project was completed in 1940.

The channel controlling depths and project dimensions are given in the table on page 8.

TIDAL RANGE AND CURRENTS

The mean range of tide is 5.0 feet at Fort Sumter, 5.2 feet at South Carolina State Ports Authority Union Pier and at North Charleston; and 6.0 feet at Cainhoy.

The tidal currents are rotary about 1 knot off the entrance to Charleston Harbor, 1.5 to 2.0 knots between the jetties at strengths of flood and ebb tides. West-northwesterly storms produce ebb currents of 4 knots above Drum Island to Fort Sumter.

ANCHORAGES

The principal anchorage area for deep-draft vessels in Charleston Harbor is in the triangle westward of the junction of the Rebellion Reach section of the main entrance channel with South Channel. In addition, the anchorage grounds for general use include all the navigable portions of the harbor and the portions of the Cooper, Ashley, and Wando Rivers adjacent thereto, except the following:

Areas of prohibited anchorage.

(a) A ship channel 1,000 feet wide between the jetties, thence 800 to 400 feet wide (or as much wider as an improved channel may herafter be dredged) following the established ranges and usual courses and passing east of Drum Island to Goose Creek. Between the north Customhouse Wharf and the northernmost building ways of the former Charleston Drydock and Shipbuilding Company to include all the area between the western limit of the Channel and the eastern waterfront of Charleston.

(b) A ship channel 500 feet wide from the northernmost building ways of the former Charleston Drydock and Shipbuilding Co. north through Town Creek following the established ranges and usual courses and connecting at both ends with the main channel.

(c) A ship channel in Ashley River from its mouth to Standard Wharf 300 feet wide following the established ranges and usual courses and widened at bends and at the upstream and downstream ends.

(d) The commonly used channel in Wando River with width of 200 feet.

(e) The commonly used channel in Hog Island Channel with a width of 200 feet from Cooper River to the area opposite Shem Creek.

Special anchorages. Two special anchorages are provided in Cooper River along the eastern waterfront of Charleston. The used of the special anchorages is limited to loaded vessels for a period of not more than 72 hours. The bearings and distances for the centers of the special anchorages are from the tank atop the Fort Sumter Hotel on the Battery at Charleston:

(a) 30°30' true, 2,687 yards; diameter of anchorage 1,400 feet.

(b) 37°00' true, 2,017 yards; diameter of anchorage, 1,400 feet.

Locations of the special anchorages and the anchorage area in Charleston Harbor are shown on the accompanying Port Facilities Map.

BRIDGES

Within the port area, cross-river highway traffic (U.S. Highway 17-701) is served by four state-owned bridges. On the east side of Charleston, two fixed, parallel, high-level bridges--"Silas N. Pearman" and "Grace Memorial"--cross Town Creek, Drum Island, and Cooper River above the South Carolina State Ports Authority's Columbus Street Terminal. The Town Creek spans of the bridges each has a clear width of 600 feet, and a vertical clearance of 135 feet at mean high water. Both center spans over the Cooper River channel have horizontal clearances of 1,000 feet, and vertical clearances above mean high water of 150 feet for the 300-foot center channel section, and 135 feet for the remaining section. On the west side of Charleston, two parallel, bascule-type, highway bridges cross the improved portion of the Ashley River about 2.5 miles above the mouth. The bridges are about 300 feet apart, have a horizontal clearance of 100 feet each; in a closed position, the downstream bridge has a vertical clearance of 18 feet, and the upstream bridge, 14 feet above mean high water.

WEATHER CONDITIONS

Charleston is situated in an area of low elevation which ranges from sea level to 20 feet, with gradual increases in elevation toward inland areas.

The prevailing winds are southerly in the spring and summer and northerly during the fall and winter. The proximity of the ocean has a tempering effect on Charleston's climate. In winter, the minimum city temperature may register from 10 to 15 degrees higher than that recorded at the airport located 10 miles inland; this marine influence may cause the maximum city's temperatures to be lowered several degrees.

The winter months, December through February, are mild with rainfall averaging 18 percent of the annual total; spring rainfall from March through May averages about 20 percent of the annual total. A temperature of 20 degrees or less is seldom experienced. Some chance of snow flurries may occur in January, but a significant amount is rarely measured.

The summers are warm and humid; however, over a period of years, the mercury has reached 100 degrees or higher only once during the season. Forty-one percent of the annual rainfall occurs in summer, mostly from thunderstorms over scattered areas. The weather is moderate and sunny from late September to early November. Hurricanes threaten the coastal section in late summer and early fall, and tropical storms occasionally cause heavy weather.

The information on page 9 was compiled by the National Weather Station at the Charleston Municipal Airport, Charleston, SC, and furnished by the Environmental Data Service, National Oceanic and Atmospheric Adminstration, U. S. Department of Commerce.

CHARLESTON HARBOR CHANNEL

CONTROLLING DEPTHS AND PROJECT DIMENSIONS

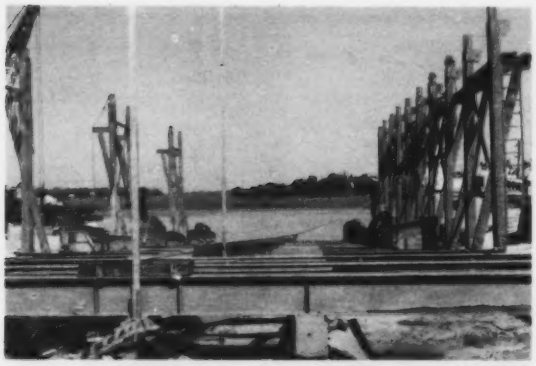
NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOW WATER (MLW)					PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLW (FEET)
Fort Sumter Range	23.1	36.8	34.0	18.5	4-78	A1,000	9.0	35
Mount Pleasant Range	32.1	38.8	38.1	27.5	4-78	A1,000-600	1.6	35
Rebellion Reach	22.8	37.2	37.8	31.4	4-78	600	1.9	35
Folly Reach	35.6	37.1	39.5	29.2	12-78	600	0.5	35
Shutes Reach	35.5	38.9	38.8	35.1	12-78	800	0.3	35
Horse Reach	37.9	39.0	38.6	35.2	4-78	800	0.5	35
Customhouse Reach	36.6	33.4	36.4	39.7	3-78	1,000-600	0.2	35
South Channel	21.9	21.3	20.8	19.9	8-77	1,000	3.1	35
Hog Island Reach	33.6	38.0	37.0	33.1	5-79	600	1.3	35
Drum Island Reach	39.5	39.3	40.4	35.0	1-79	600	1.0	35
Town Creek Lower Reach	30.9	38.3	39.8	38.0	3-79	500	1.1	35
Turning Basin	38.0	36.6	35.2	30.0	3-79	300-1,500	0.25	35
Town Creek Upper Reach	28.8	39.0	39.6	26.5	3-78	500-600	1.0	35
Myers Bend	31.9	37.8	39.3	36.3	3-78	600-900	0.8	35
Daniel Island Reach	38.4	37.1	33.7	29.0	5-79	600-800	1.0	35
Daniel Island Bend	32.8	32.1	39.3	33.9	12-78	600-800	0.6	35
Clouter Creek Reach	35.1	36.1	38.8	36.2	12-78	600	0.9	35
Navy Yard Reach	38.3	39.9	40.0	31.9	12-78	400-800	1.1	35
North Charleston Reach	27.1	38.7	38.1	31.7	12-78	400-600	1.0	35
Filbin Creek Reach	33.7	37.4	39.1	35.6	12-78	400	0.6	35
Port Terminal Reach	27.6	38.0	40.3	32.2	12-78	400-700	0.7	35
Ordnance Reach	25.5	33.1	36.2	36.2	12-78	400	0.3	35
Shipyard Creek:								
Main Channel	36.0	37.2	36.9	34.1	1-79	900-200	1.0	30
Lower Turning Basin	34.5	38.2	37.0	37.6	1-79	700	0.2	30
Upper Turning Basin	36.3	37.7	37.8	38.3	1-79	500	0.15	30
Ashley River:		CENTERLINE						
To Highway 17 Bridge		24			8-77	300	7.4	30
To Old Town Creek		19			8-77	300	7.4	30
To Highway 7 Bridge		13½-13			8-77	300	7.4	30
Shem Creek		10			8-78	100-90	B	10

A. Channel maintained to a width of 800 feet for Fort Sumter Range and 800-600 feet for Mount Pleasant Range.
B. To U.S. Highway 17 Bridge.

METEOROLOGICAL DATA FOR PERIOD OF RECORD

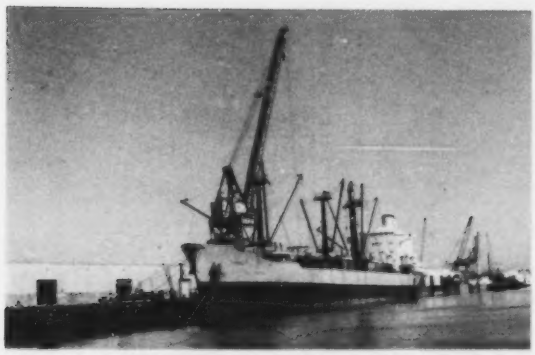
TIME	NORMAL DAILY TEMPERATURE F.°		NORMAL TOTAL PRECIPITATION (INCHES)	PREVAILING DIRECTION OF WINDS	HEAVY FOG DAYS
	MAXIMUM	MINIMUM			
No. of Years	36	36	36	14	29
January.....	59.8	37.3	2.90	SW	4
February.....	61.9	39.0	3.27	NNE	2
March.....	67.8	45.1	4.75	SSW	2
April.....	76.2	53.0	2.95	SSW	2
May.....	83.1	61.1	3.81	S	2
June.....	87.7	68.1	6.30	S	2
July.....	89.1	71.2	8.21	SW	1
August.....	88.6	70.6	6.44	SW	1
September.....	84.5	65.9	5.17	NNE	2
October.....	77.1	55.1	3.05	NNE	3
November.....	68.4	44.1	2.13	N	4
December.....	60.8	37.7	3.14	NNE	3
Year.....	75.4	54.0	52.12	NNE	28

South Carolina State Ports Authority North Charleston Terminal
(P.W.D. Ref. Nos. 36 and 37)



Swygert Shipyard and Dry Dock Marine Railway (P.W.D. Ref. No. 1)

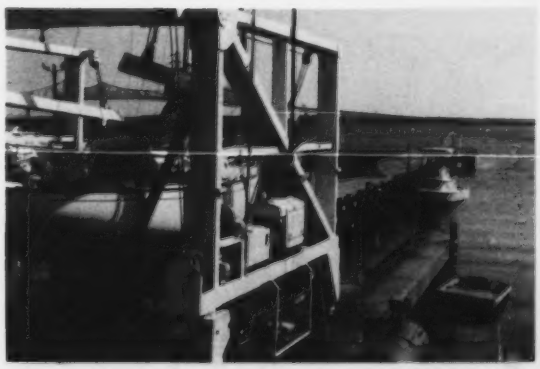
Pre-Stress Concrete Co. Barge Slip (P.W.D. Ref. No. 4)



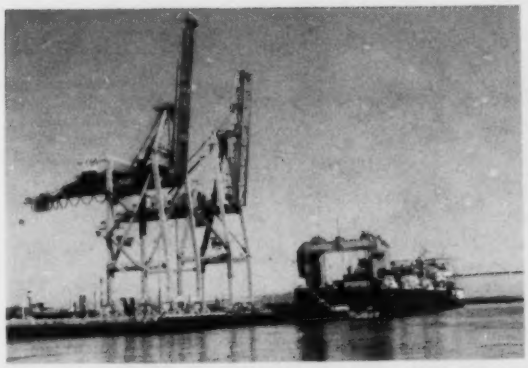
State Pier 2, Union Pier, Berths Nos. 2 and 3 (P.W.D. Ref. No. 11)

White Stack Towing Corp. Pier (P.W.D. Ref. No. 12)

Del Monte Banana Co. Pier (P.W.D. Ref. No. 13)

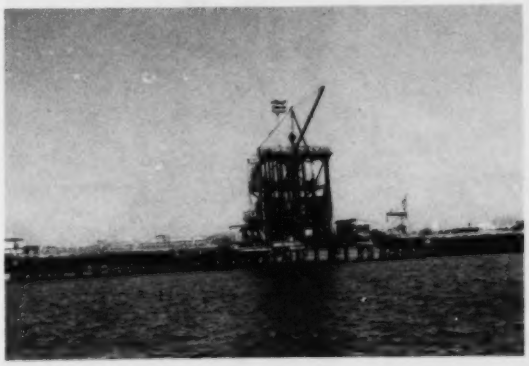


Town Creek Boat Yard Vertical Boat Lift (P.W.D. Ref. No. 14)



State Pier 8, Columbus Street Terminal
Container Wharf (P.W.D. Ref. No. 15)

Shear Leg Derrick, State Pier 8, Columbus
Street Terminal, Berths Nos. 3, 4, and 5
(P.W.D. No. 17)

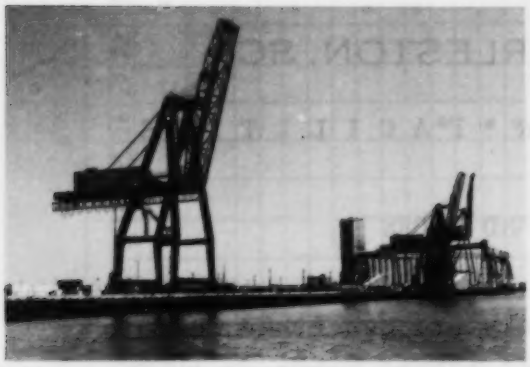


Exxon Company, U.S.A.
(P.W.D. Ref. No. 21)

Shipyard River Terminal, division of Burris
Chemical, Inc. (P.W.D. Ref. No. 22)

Gulf Oil Co. Wharf (P.W.D. Ref. No. 23)

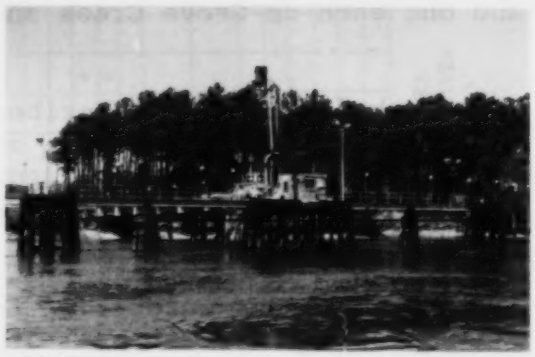
Shell Oil Co. and Texaco Wharves
(P.W.D. Ref. Nos. 30 and 31)



State Pier 16, North Charleston Terminal Berths Nos. 2 and 3 (P.W.D. Ref. No. 37)

South Carolina State Ports Authority Grain Terminal (P.W.D. Ref. No. 38)

General Dynamics Barge Slip (P.W.D. Ref. No. 39)



South Carolina Electric and Gas Co. Wharf (P.W.D. Ref. No. 41)

C.A. Magwood and Sons Wharf (P.W.D. Ref. No. 52)

Wholesale Seafood and Moultrie Fisheries Wharves (P.W.D. Ref. Nos. 56 and 57)

THE PORT OF CHARLESTON, SC

PORT AND HARBOR FACILITIES

PIERS, WHARVES, AND DOCKS

Sixty piers, wharves, and docks are described in this report for the Port of Charleston. Twenty-eight of these facilities are on the right bank of the Cooper River; one each on the left bank and the West Branch Cooper River; five each on the Shipyard River; six on the Ashley River; four on the Wando River; two on the Stono River; eleven on Shem Creek; and one each on Grove Creek and Clouter Creek.

Each facility is described under a reference number in the table of Piers, Wharves, and Docks beginning on page 18. These reference numbers designate facility locations on the accompanying Port Facilities Map.

The numerous waterfront facilities in the port used exclusively by recreational or active military craft, and generally those docking facilities providing nonmaritime use are not included in this report.

The table on the following pages summarizes the functional uses of the various piers, wharves, and docks at Charleston. Many of these wharves are used for multiple purposes as indicated in the table; each can be identified by its respective P.W.D. reference number.

A summary of facilities engaged in handling general cargo at the port is given on page 17.

PURPOSE FOR WHICH USED

LOCATION	A	B	C		D				E													F					E			
P.W.D. REFERENCE NUMBERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Cargo handling:																														
General cargo:																														
Conventional										•	•					•	•													
Containerized											•				•	•														
Heavy lift items											•						•													
Alumina																													•	
Asphalt																					•									
Bananas													•					•												
Bulk cargo (dry misc.)																						•							•	
Bulk cargo (liquid misc.)																						•								
Chemicals (liquid)																													•	
Coke																										•				
Concrete products				•																										
Ferro-alloys																										•				
Ore																										•				
Petroleum products																					•		•					•		•
Bunkering (vessels)																					•		•							
Bunkering (supplying barges)																					•									
Passengers										•																				
Marine repair	•				•									•					•	•				•						
Drydocking	•													•						•										
Repairs to own equipment			•																											
Handling construction supplies and equipment		•																						•						
Mooring:																														
Company-owned equipment		•	•																					•						
Excursion vessels								•																						
Pilot boats									•																					
Government equipment						•	•																							
Harbor craft/Tugs												⊗							•											
Bunkering barges																			•											
Not operated or used																									•		•			

A - RIGHT BANK, STONO RIVER
B - LEFT BANK, STONO RIVER
C - RIGHT BANK, ASHLEY RIVER
D - LEFT BANK, ASHLEY RIVER
E - RIGHT BANK, COOPER RIVER
F - RIGHT BANK, SHIPYARD RIVER

PURPOSE FOR WHICH USED

LOCATION	RIGHT BANK, COOPER RIVER											A	B	C	D	E				LEFT BANK, SHEM CREEK								F		
P.W.D. REFERENCE NUMBERS	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Cargo handling:																														
General cargo:																														
Conventional						•																								
Containerized							•																							
Creosoted wood products												•																		
Fuel oil for plant consumption											•																			
Grain								•																						
Liquefied natural gas tanks									•																					
Machinery/heavy equipment													•																	
Paper products					•																									
Petrochemicals														•																
Petroleum products	•	•	•																											
Seafood																				•		•				•	•	•		
Steel structures (fabricated)										•																				
Bunkering (vessels)			•																											
Fueling small vessels																					•		•		•				•	
Marine repair																	•	•	•				•	•						
Drydocking																	•		•				•	•						
Conversion																	•	•	•											
Handling construction supplies and equipment															•															
Icing fishing vessels																					•				•					
Mooring:																														
Company-owned equipment															•															
Fishing vessels																				•	•	•	•	•	•	•	•	•	•	•
Sport fishing vessels																											•			
Not operated or used				•																										
Under construction																•														

A - LEFT BANK, WEST BRANCH COOPER RIVER
B - LEFT BANK, GROVE CREEK
C - LEFT BANK, COOPER RIVER
D - LEFT BANK, CLOUTER CREEK
E - LEFT BANK, WANDO RIVER
F - RIGHT BANK, SHEM CREEK

SUMMARY OF GENERAL AND CONTAINERIZED CARGO FACILITIES

P.W.D. REF. NO.	NAME OF OPERATOR AND/OR TERMINAL	BERTHING SPACE (FEET)	DEPTHS ALONGSIDE AT MLW (FEET)	TRANSIT SHEDS		OPEN STORAGE (ACRES)
				NUMBER	CARGO SPACE (SQ.FT.) (NET)	
	South Carolina State Ports Authority					
	Union Pier, State Pier 2:					
10	Lower Wharf, Berth 1.....	850 w/dolph.	35	1	66,000	-
11(1&2)	Upper Wharf, Berths 2 and 3....	1,771(5)	35	2	219,600	20.0
	Columbus Street Terminal, State Pier 8:					
15(3)	Berth 1.....	900	35	-	-	54.0
16(1)	Berth 2.....	740	35	1	75,000	1.1
17(2)	Berths 3, 4, and 5.....	1,798	35	2	284,400	5.5
	North Charleston Terminal:					
36	State Pier 15, Berth 1.....	600	35	3	245,000(4)	-
37(3)	State Pier 16, Berths 2 and 3..	1,860	35	-	-	104.0
	Wando Terminal:					
46(5)	State Pier 41, Berths 1, 2, and 3.....	2,675	35	-	-	80.0
	TOTAL.....	11,194	--	9	890,000	264.6

(1) Also used for handling containerized general cargo.
(2) Also used for handling heavy-lift items.
(3) Containerized general cargo terminal.
(4) Additional 14,400 square feet of lumber storage.
(5) Terminal under construction at time of survey.

Corps of Engineers Port Code No. 12260							12214		
REFERENCE NUMBER ON MAP	1 Dock Code No. 021			2 Dock Code No. 013			3 Dock Code No. 927		
NAME	Swygert Shipyard and Dry Dock.			Carolina Dredging Co. Wharf.			Merritt Dredging Co., Piers and Mooring.		
LOCATION ON WATERFRONT	Johns Island, right bank of Stono River, approximately 3.8 miles above west end of Elliott Cut, Atlantic Intracoastal Waterway.			Left bank of Stono River above west entrance to Wappoo Creek, approximately 0.5 mile above west end of Elliott Cut, Atlantic Intracoastal Waterway.			Inner portion of southeast and northwest sides of slip; entrance to slip on right bank of Ashley River between lower highway bridge (U.S. Route 17) and mouth of Wappoo Creek.		
OWNED BY	Sandblasters, Inc. d.b.a. Swygert Shipyard and Dry Dock.			Carolina Dredging Co., Inc.			Merritt Dredging Co.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Mooring various types of vessels and barges for repair.			Mooring company-owned floating equipment; handling construction supplies, materials, and equipment to and from barges.			Mooring and repairing company-owned floating equipment.		
TYPE OF CONSTRUCTION	Timber pile, concrete-decked pier; 4 timber and 2 concrete-capped, steel pile mooring dolphins in line with face.			Steel sheet pile bulkhead with solid fill.			Four parallel, timber pile, timber-decked piers extending from steel sheet pile bulkhead with solid fill on inner portion of slip. Nine timber mooring dolphins east of and in line with face of east pier.		
DESCRIPTION	Face	Lower side	Upper side	Face			East pier	Center pier	West pier
Dimensions (Feet)	20	120	120	55			18 by 7	25 by 19	21 by 12
Depth Alongside at MLW Do.	17	17	17	0-7			7	7	7
Usable Berthing Space Do.	200 w/dolphs	120	120	55			(See Remarks)	(See Remarks)	(See Remarks)
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	12			8			8, bulkhead; 6, piers.		
Load Capacity per Sq.Ft. (Lbs.)	1,000			-			-		
Lighted or Unlighted	Lighted.			Unlighted.			Unlighted.		
TRANSIT SHED	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	One 60- and one 35-ton, diesel crawler cranes, each with 60-foot boom; one 20-ton diesel hydraulic, mobile crane with 50-foot boom; one 4-ton diesel fork lift truck; one 2 1/2-cubic yard diesel front end loader; 2 diesel bulldozers; and one 10-ton gasoline mobile crane with 40-foot boom, mounted on 60- by 30-foot barge.			Three 25-ton diesel crawler cranes, each with 55-foot boom.			One 40-ton, gasoline, stiff-leg derrick with 76-foot boom mounted on bull wheel; derrick is located on 12- by 12-foot, timber pile, concrete-decked platform located between the center and west piers. In addition, one 10- and two 6-ton mobile cranes, each with 30-foot telescopic boom.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via private road, gravel, 26 feet wide, from River Road, asphalt, 19 feet wide.			Via gravel road, 20 feet wide from Wappoo Road, asphalt, 24 feet wide from Savannah Highway (U.S. Route 17), asphalt, 4-lane.			Via private road, asphalt, 18 feet wide, from Albemarle Road, asphalt, 20 feet wide.		
WATER SUPPLY (Available to Vessels)	Through one 4-inch line.			Through 1 1/2-inch line.			Through 1 1/2-inch lines on center and west piers.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 208/220/440 volts, 3-phase, 60-cycle; D.C., 110/208 volts.			None.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	Pump and 4-inch fireline.			Hand extinguishers.			Hand extinguishers.		
REMARKS	One 1,000-ton marine railway located above pier; marine repair plant located in rear.			-			Faces of piers are in line, and with mooring dolphins provide for approximately 1,250 feet of continuous berthing; approximately 600 feet of additional berthing is available along natural bank on opposite side of inner portion of slip. Contractor's storage yard located in rear.		

Corps of Engineers Port Code No. 12214

REFERENCE NUMBER ON MAP	4 Dock Code No. 927			5 Dock Code No. 157			6 Dock Code No. 033		
NAME	Pre-Stress Concrete Co., Barge Slip.			Braswell Shipyards Wharf.			U.S. Coast Guard Base, Upper Wharf.		
LOCATION ON WATERFRONT	Near center of north portion of slip; entrance to slip on right bank of Ashley River between U.S. Highway 17 Bridge and mouth of Wappoo Creek.			Left bank of Ashley River approximately 1.9 miles below State Highway No. 7 Bridge.			Left bank of Ashley River, above foot of Tradd Street.		
OWNED BY	Pre-Stress Concrete Co., Inc.			Braswell Shipyards, Inc.			United States Government.		
OPERATED BY	do.			do.			U.S. Coast Guard.		
PURPOSE FOR WHICH USED	Shipment of prestressed concrete products by barge.			Mooring vessels for repair.			Mooring U.S. Coast Guard vessels; handling navigation buoys.		
TYPE OF CONSTRUCTION	Barge slip formed by 2- by 3-foot concrete beams supported by timber piles on inner end and concrete piles on outer end; timber fender system along sides and head of slip.			Timber pile, concrete-decked, offshore wharf with 50- by 4-foot approach to upper end; timber remains of 475- by 22-foot, curved, rail trestle approach from shore to upper side.			Angular-shaped, concrete pile, concrete-decked wharf fronted by timber pile fenders; a timber mooring dolphin in line with face and rear of face on upper side; styrofoam filled timber floats along rear of face at outer portion. (See Remarks.)		
DESCRIPTION	Head of slip	North side	South side	Face	Rear of face	Upper and lower sides	Face	Rear of face	Upper side
Dimensions (Feet)	40	100	100	300	300	50, each.	310+140+271	290+100+255	50
Depth Alongside at MLW Do.	8	8	8	28	10	-	20-25	15	20-25
Usable Berthing Space Do.	One barge can berth in slip.			300	290	-	340 w/dolph+160	330 w/dolph.	(See Remarks)
Width of Apron Do.	-			Open.			-		
Height of Deck Above MLW Do.	-			11			12		
Load Capacity per Sq.Ft. (Lbs.)	-			-			650		
Lighted or Unlighted	Cranes lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Two electric bridge cranes travel over slip on rails extending from casting plant and open storage area in rear; each crane is equipped with a 25- and two 10-ton electric hoists. One 10-ton, diesel travel lift straddle-carrier serves yard at rear.			One 100-ton diesel mobile crane, 150-foot boom with extensions to 250 feet; one 20-ton, diesel-hydraulic, mobile crane with 120-foot telescopic boom; two 3-ton, gasoline fork lift trucks; and one 15-ton, diesel revolving crane mounted on 100- by 30-foot barge.			One 10-ton, gasoline, mobile crane with 22-foot telescopic boom; one 4- and one 3-ton, gasoline, fork lift trucks.		
RAILWAY CONNECTIONS	One surface track in rear connects with Seaboard Coast Line Railroad.			Trackage serving plant in rear connects with Seaboard Coast Line Railroad.			None.		
HIGHWAY CONNECTIONS	Via private road, gravel, various widths, from Albemarle Road, asphalt, 20 feet wide.			Via private road, asphalt, 18 feet wide, from King Street Extension (U.S. Highway No. 78).			Via driveway, various widths, from Tradd Street, paved, 25 feet wide.		
WATER SUPPLY (Available to Vessels)	None.			Through one 4-inch line.			Through 2½-inch line.		
ELECTRIC CURRENT (Available to Vessels)	None.			A.C., 450 volts, 3-phase, 60-cycle.			A.C., 440 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	None.			Six-inch water line, hose, and watchmen.			Hydrant, hose, portable diesel fire pumps, hand extinguishers, and 24-hour duty.		
REMARKS	Plant at rear manufactures prestressed concrete beams and piles, and concrete roof and floor slabs.			Compressed air, steam, salt and fresh water available at wharf.			At time of survey wharf was under construction and is described as it will appear and be operated upon completion. The upper side has a 50- by 16-foot wide slip to accommodate a planned 30-ton, gasoline, mobile vertical boat lift. Berthing for small craft will be along 170- by 7-foot timber floats along rear of face. Inner portion of existing wharf will remain for use as storage for navigation buoys and piles.		

Corps of Engineers Port Code No. 12214

REFERENCE NUMBER ON MAP	7 Dock Code No. 033			8 Dock Code No. 008			9 Dock Code No. 984		
NAME	U. S. Coast Guard Base, Lower Wharf.			Gray Line Wharf.			Adgers South Wharf.		
LOCATION ON WATERFRONT	Left bank of Ashley River at foot of Tradd Street.			Left bank of Ashley River, above foot of King Street.			Right bank of Cooper River, foot of Tradd Street extended.		
OWNED BY	City of Charleston.			Gray Line Water Tours.			Charleston Navigation Co.		
OPERATED BY	U. S. Coast Guard.			do.			Charleston Branch Pilots Association.		
PURPOSE FOR WHICH USED	Mooring U. S. Coast Guard vessels.			Mooring harbor excursion vessels.			Mooring harbor pilot boats.		
TYPE OF CONSTRUCTION	Timber pile, timber-decked pier. (See Remarks.)			Timber pile, timber-decked, offshore wharf with 240- by 10-foot approach from seawall; 2 timber mooring dolphins form a 20-foot wide berth parallel to face.			Pier formed by 2 sections of masonry and concrete retaining walls with solid fill, connected by a 30- by 4-foot timber walkway; a 150- by 4-foot, timber pile, timber-decked extension at outer end of outer solid-filled section; and a (Continued under Remarks.)		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	10	222	222	80	10	10	4	150+90+30+190	150+90+30+190
Depth Alongside at MLW Do.	10	10	10	5	4	5	6	0-6	0-6
Usable Berthing Space Do.	-	222	162	80 (See Remarks)		-	-	-	150+90
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	9.5			9			13, outer section; 10, inner section.		
Load Capacity per Sq.Ft. (Lbs.)	200			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	One 10-ton, gasoline, mobile crane with 22-foot telescopic boom; one 4- and one 3-ton, gasoline, fork lift trucks.			None.			None.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via driveway, various widths, from Tradd Street, paved, 25 feet wide.			Via Murray Boulevard, asphalt, dual lane, each side 18 feet wide.			Via Concord Street, macadam, 22 feet wide.		
WATER SUPPLY (Available to Vessels)	Through 1 1/2-inch line.			Through one 3/4-inch line.			Through one 1 1/2-inch line.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle.			None.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	Hydrant, hose, portable diesel fire pumps, hand extinguishers, and 24-hour duty.			None.			Water line and hand extinguishers.		
REMARKS	A 20-foot wide timber access extends at right angle from upper side of inner end of approach to timber storage platform adjacent to Upper Wharf (Ref. No. 6).			Excursion vessel also moors along rear of face.			100- by 20-foot, timber pile, timber-decked extension along upper side of inner portion of solid-filled section of pier. Upper side of inner section of pier forms 60-foot wide slip (dries at low water) with former Adgers North Wharf.		

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP NO. 2	10 Dock Code No. 967	11 Dock Code No. 967	12 Dock Code No. 955
NAME	State Pier 2, Union Pier, Lower Wharf, Berth 1.	State Pier 2, Union Pier, Upper Wharf, Berths 2 and 3.	White Stack Towing Corp. Pier.
LOCATION ON WATERFRONT	Between foot of Market and Pritchard Streets extended.	Between foot of Pritchard and Hasell Streets.	Foot of Laurens Street.
OWNED BY	South Carolina State Ports Authority.	South Carolina State Ports Authority.	White Stack Towing and Transportation Co., Division of Turecamo Coastal and Harbor Towing.
OPERATED BY	do.	do.	do.
PURPOSE FOR WHICH USED	Receipt and shipment of general cargo in foreign and domestic trades; passengers.	Receipt and shipment of general and containerized cargo in foreign and domestic trades including heavy lift items.	Mooring company-owned tugboats.
TYPE OF CONSTRUCTION	Prestressed concrete pile, concrete-decked wharf with two 20-foot roadway, and one 10-foot walkway concrete approaches from existing masonry abutments on lower end; one mooring dolphin on lower side connected by catwalk.	Prestressed concrete pile, concrete-decked wharf. (See Remarks.)	Concrete pile, concrete-decked pier extending from timber bulkhead with solid fill.

DESCRIPTION	10 Face	10 Lower side	11 Face	11 Upper side	12 Face	12 Lower side	12 Upper side
Dimensions (Feet)	700	40+92	1,771	80+303+152	10	290	290
Depth Alongside at MLW Do.	35	"	35	"	18	0-18	0-18
Usable Berthing Space Do.	850 w/dolphs.	"	1,771 (See Remarks)		"	290	290
Width of Apron Do.	40		45 and open.		Open.		
Height of Deck Above MLW Do.	12		12		10		
Load Capacity per Sq.Ft. (Lbs.)	400		400; 1,000 (upper 744 feet)		"		
Lighted or Unlighted	Lighted.		Lighted.		Lighted.		
TRANSIT SHEDS	One - low concrete walls topped by steel frame, metal covered; part concrete and part wood floor supported by concrete piles.		Two - low concrete walls topped by steel frame; metal covered; concrete floor supported by concrete piles.		None.		
Number and Type of Construction			Building 318		Building 322		
Length and Width (Feet)	360 by 270-300		605 by 302		455 by 242		
Height Inside do.	15		20		20		
Floor Area for Cargo (Sq.Ft.)	66,000		137,000 net		82,600 net		
Load Capacity per Sq.Ft. (Lbs.)	400, concrete floor; 250, wood floor.		600		600		
Cargo Doors	Shipside: Three, 20- by 16-foot.		Shipside: Seven, 18- by 16-foot; rear: Three, 18- by 16-foot, and one, 12- by 16-foot truck and one, 25- by 17-foot rail entrance doors.		Shipside and rear: Four 20- by 18-foot, each; sides: Eight 20- by 18-foot, each.		
MECHANICAL HANDLING FACILITIES	Seven diesel 7½- to 12½-ton, twenty-one LF gas and two gasoline, 3½- to 4-ton fork lift trucks; five 2- to 4-ton gasoline, vacuum clamp trucks; and sixteen 2½-ton fork lift trucks equipped with clamps. The following diesel mobile cranes are also available for use at all South Carolina State Ports Authority Terminals:		One diesel-electric traveling, revolving, full portal capacity 103-tons at 55-foot radius having 31-foot outboard reach. Present crane travel 1,033 feet will increase to 1,421 feet upon completion of upper wharf expansion. Use of equipment described under Ref. No. 10 and additional equipment provided by stevedoring companies.		One 2-ton, gasoline, mobile crane with short boom.		

No.	Cap tons	Boom ft	Radius ft	Cap tons	Boom ft	Radius ft
2	140	50	12	5.2	150	150
1	90	50	12	5.8	100	100
1	60	36	10	0.8	114	109
1	40	32	10	1.4	100	90

Additional equipment provided by stevedoring companies.

RAILWAY CONNECTIONS	South Carolina Public Railways Commission: Two platform-level tracks inside transit shed, total length 360 feet, one siding extends to rear of transit shed.	South Carolina Public Railways Commission: Two platform-level tracks inside lower transit shed, total length 440 feet; one platform level track along each side of upper transit shed, total length 480 feet; two surface tracks serve open storage deck located between transit sheds, total length 660 feet; and one 500 foot surface track will serve upper wharf expansion.	None.
HIGHWAY CONNECTIONS	Via Pritchard Street, concrete and macadam, 25 feet wide, from East Bay Street (U.S. Highway No. 52A), asphalt, 44 feet wide.	Same as Ref. No. 10.	Via Laurens Street, stone block, 15 feet wide, from Concord Street, asphalt, 72 feet wide.
WATER SUPPLY (Available to Vessels)	Through one 6-inch line with 2½-inch hose connections.	Same as Ref. No. 10.	Through one 2-inch line with 1½-inch hose connections.
ELECTRIC CURRENT (Available to Vessels)	None.	None.	A.C., 110/220 volts, single-phase, 60-cycle.
FIRE PROTECTION (Other than City)	One 100,000-gallon water tower, sprinkler system in transit shed, hydrants, hose, and 1,000-gallon per minute pump.	Same as Ref. No. 10.	Hydrant, hose, hand extinguishers, and watchmen.
REMARKS	Two buildings located adjacent to rear of transit shed used as storage warehouses (S.W. Ref. Nos. 2 and 3). A 300- by 60-foot passenger terminal and approach plaza at rear of lower end of wharf. Transit shed is connected by covered sisleway to transit shed on Upper Wharf (Ref. No. 11). Face of wharf is in line and contiguous with face of Upper Wharf (Ref. No. 11) providing for 2,621 feet of continuous berthing space using lower dolphin.	Face of wharf is in line and contiguous with face of Lower Wharf (Ref. No. 10) providing for 2,621 feet of continuous berthing space, using lower dolphin. Lower Transit shed is connected by covered sisleway to transit shed on Lower Wharf (Ref. No. 10). S.W. Ref. No. 4 located at rear on west side of Concord Street. At time of survey the upper 388 feet of wharf was under construction. Between the transit sheds and at rear of new construction there are two 2-acre, concrete-decked open storage areas, and an additional 16 acres of paved open storage area at rear.	Tug dispatch office located in rear.

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	13 Dock Code No. 953			14 Dock Code No. 950			15 Dock Code No. 943		
NAME	Del Monte Banana Co. Pier.			Town Creek Boat Yard Pier.			State Pier 8, Columbus Street Terminal, Container Wharf, Berth 1.		
LOCATION ON WATERFRONT	Between foot of Laurens and Calhoun Streets extended.			Below foot of Charlotte Street.			Above foot of Charlotte Street.		
OWNED BY	Betyens Shipyards, Inc.			Town Creek Boat Yard, Inc.			South Caroline State Ports Authority.		
OPERATED BY	Southern Stevedoring Co., Inc.			do.			do.		
PURPOSE FOR WHICH USED	Receipt of bananas.			Mooring small vessels for repair.			Receipt and shipment of containerized cargo in foreign and domestic trades.		
TYPE OF CONSTRUCTION	Timber pile, timber-decked pier extending from steel sheet pile bulkhead with solid fill.			Concrete pile, concrete-decked offshore wharf, with 290- by 12-foot concrete approach.			Prestressed concrete pile, concrete-decked wharf; fronted by timber fender system.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	
Dimensions (Feet)	52	477	375	70	20	20	900	150	
Depth Alongside at MLW Ft.	35	25	-	12	9-12	9-12	35	-	
Usable Berthing Space Ft.	-	477	(See Remarks)	70	(See Remarks)	-	900	-	
Width of Apron Ft.	Open.			Open.			Open.		
Height of Deck Above MLW Ft.	10.7			8			12		
Load Capacity per Sq.Ft. (Lbs.)	500			-			1,000		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
MECHANICAL HANDLING FACILITIES	Portable, electric 19-inch conveyors serve two 19-inch electric belt conveyor systems extending through shed at rear to truck loading stations; each with capacity of 3100 to 3400 boxes per hour.			Equipment available as required.			Two 40-long ton, diesel-electric, traveling, container-handling cranes, each with 128-foot hinged-cantilevered boom having 104-foot outboard reach, hoist height of 82.5 feet above apron; lower and upper cranes have 51- and 61-foot back reach, and 214.5- and 224.5-foot container travel length, respectively each with an operating rate of 30 containers per hour and travel length of 900 feet. One 40- and two 35-ton diesel-hydraulic traveling top-lift container handlers capable of stacking containers 2 and 3 high, respectively. Three diesel-electric, traveling, revolving level-luffing, gantry cranes; one with capacity of 75 tons at 21-foot outboard reach and 27.5 tons at 81-foot outboard reach; one with capacity of 50 tons at 31-foot outboard reach and 30 tons at 66-foot outboard reach; and one with capacity of 30 tons at 34-foot outboard reach and 15 tons at 64-foot outboard reach. Cranes have a total travel length of 2,006 feet providing service full length of adjacent Berth 2, and 366 feet of Berth 3 above (Ref. Nos. 16 and 17 respectively). Use of mobile cranes described under Ref. No. 10.		
RAILWAY CONNECTIONS	None.			None.			South Carolina Public Railways Commission: One 990-foot surface track on apron and one surface track extends diagonally across upper portion, join with tracks on apron of Ref. No. 16; connect with additional terminal trackage in rear.		
HIGHWAY CONNECTIONS	Via driveway, asphalt, from Concord Street, asphalt, 22 feet wide.			Via foot of Charlotte Street, part-asphalt, 22 foot wide.			Via terminal roadways, asphalt, various widths, from Columbus Street, asphalt, 24 feet wide.		
WATER SUPPLY (Available to Vessels)	Through 8-inch line with 2 1/2-inch hose connections.			Through 3/4-inch line.			Through one 6-inch line with 2 1/2-inch hose connections.		
ELECTRIC CURRENT (Available to Vessels)	None.			A.C., 110 volts, single-phase, 60-cycle.			None.		
FIRE PROTECTION (Other than City)	Hydrants, hose, hand extinguishers, and watchmen.			Hydrant, hose, and hand extinguishers.			Automatic fire detection system, hydrants, hose, hand extinguishers, 1,000-gallon per minute pump, watchmen, sprinkler system in transit shed, and one 100,000-gallon water tower.		
REMARKS	Only the lower side of pier is used for berthing. Terminal has twelve truck loading stations and a 65-truck parking area.			Marine repair yard and shops located at rear. Vessels berth along 200 feet of timber fendered, lower side of approach. A 40- by 6-foot concrete pier parallel to lower side of approach at inner end form 40- by 13-foot slip served by 30-ton mobile gasoline boat lift.			Open 54 acre storage area at rear of berth and adjacent berths 2, 3, and 4 (Ref. Nos. 16 and 17, respectively) include maneuvering areas and storage space for 2,189 containers. Trucks have access to wharf via 3 concrete approach ramps. Face of wharf is in line and contiguous with Ref. No. 16.		

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	16 Dock Code No. 941	17 Dock Code No. 925	18 Dock Code No. 922
NAME	State Pier 8, Columbus Street Terminal, Berth 2.	State Pier 8, Columbus Street Terminal, Berths 3, 4, and 5.	State Pier 9, Banana Pier.
LOCATION ON WATERFRONT	Approximately 0.5 mile below Silas N. Pearman - Grace Memorial Highway Bridges.	Below Silas N. Pearman - Grace Memorial Highway Bridges.	Under Silas N. Pearman Highway Bridge.
OWNED BY	South Carolina State Ports Authority.	South Carolina State Ports Authority.	South Carolina State Ports Authority.
OPERATED BY	do.	do.	United Brands Co.
PURPOSE FOR WHICH USED	Receipt and shipment of general and containerized cargo in foreign and domestic trades.	Receipt and shipment of general cargo and heavy-lift items in foreign and domestic trades.	Receipt of bananas.
TYPE OF CONSTRUCTION	Prestressed concrete pile, concrete-decked wharf; fronted by timber fender system.	Prestressed concrete pile, concrete-decked wharf with curved concrete rail and vehicle approach to upper side from shore.	Prestressed concrete pile, concrete-decked, offshore wharf with 140- by 25-foot covered approach.

DESCRIPTION		Face			Face			Face	Upper side	
Dimensions	(Feet)	740			1,798			437	30	
Depth Alongside at MLW	Do.	35			35			35	-	
Usable Berthing Space	Do.	740			1,798			437	-	
Width of Apron	Do.	146			46			30	-	
Height of Deck Above MLW	Do.	12			12			12		
Load Capacity per Sq.Ft.	(Lbs.)	1,000			600			600		
Lighted or Unlighted		Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS		One - low concrete walls topped by steel frame, clear span, aluminum covered; concrete floor on concrete piling.			Two - concrete walls topped by steel frame, metal covered; concrete floor on piling.			None.		
Number and Type of Construction					South shed		North shed			
Length and Width	(Feet)	550 by 130			910 by 250		607 by 250			
Height Inside	Do.	20			20		20			
Floor Area for Cargo	(Sq.Ft.)	75,000			170,600		113,800			
Load Capacity per Sq.Ft.	(Lbs.)	600			600		600			
Cargo Doors	Shipside:	Seven, 20- by 16-foot;			12		7			
	Ends:	One, 20- by 16-foot, each;			2, each.		2, lower end.			
	Rear:	Nine, 20- by 16-foot.			14		10			
					All are 20- by 16-ft. overhead doors.					
MECHANICAL HANDLING FACILITIES		Two 11½-ton, diesel, fork lift trucks; fifty-six 2- to 4-ton, gasoline, diesel, or liquid propane gas, lift trucks equipped with forks/or clamps. Use of gantry cranes described under Ref. No. 15, and mobile cranes described under Ref. No. 10. Additional equipment provided by stevedoring companies.			One electric, shear-leg derrick located between transit sheds, equipped with 150-foot boom; lift capacities of 400, 250, and 133 tons with outboard reaches of 46, 65, and 85 feet, respectively. Level-luffing cranes described under Ref. No. 15 operate along lower 366 feet of wharf. Use of mobile cranes and fork lift trucks described under Ref. Nos. 10 and 16, respectively. Additional equipment provided by stevedoring companies.			Three electric, traveling, banana unloaders, each with capacity of 3,200 boxes per hour. Four 24-inch wide, electric, belt conveyors transfer banana boxes from unloaders to 3 similar conveyors on approach extending to covered truck loading stations in rear.		
RAILWAY CONNECTIONS		South Carolina Public Railways Commission: Two connecting surface tracks on apron, total length 1,300 feet, and 2 covered, platform-level tracks along rear of transit shed, total length 1,100 feet; join trackage serving Ref. Nos. 17 and 19; connect with additional terminal trackage in rear.			South Carolina Public Railways Commission: Two connecting surface tracks on apron, total length 3,720 feet; and 2 covered platform-level tracks along rear of transit sheds, total length 3,720 feet; join additional trackage in rear.			None.		
HIGHWAY CONNECTIONS		Via terminal roadways, asphalt, various widths, from Columbus Street, asphalt, 24 feet wide.			Via terminal roadways, asphalt, various widths, from Columbus Street, asphalt, 24 feet wide.			Via Immigration Street, asphalt, 30 feet wide, from Columbus Street, asphalt, 24 feet wide.		
WATER SUPPLY (Available to Vessels)		Through one 6-inch line with 2½-inch hose connections.			Same as Ref. No. 16.			Same as Ref. No. 16.		
ELECTRIC CURRENT (Available to Vessels)		None.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			Same as Ref. No. 17.		
FIRE PROTECTION (Other than City)		Automatic fire detection system, hydrants, hose, hand extinguishers, 1,000-gallon per minute pump, watchmen, sprinkler system in transit shed, and one 100,000-gallon water tower.						Automatic fire detection system, hydrants, hose, hand extinguishers, and watchmen.		
REMARKS		Face of wharf is contiguous with Ref. Nos. 15 and 17. Open areas at rear used for container storage as described under Ref. No. 15. Approximately 90,000 square feet of additional open storage area available on apron. Trucks have access to wharf via ramps at each end and to interior of transit shed. Two 2-truck capacity loading platforms located at rear of transit shed.			Face of wharf is contiguous with Ref. Nos. 16 and 18. South transit shed has clear span and is divided into 2 sections by brick firewall. Trucks have access to wharf apron via ramps located above and below South transit shed or via curved concrete approach to upper end, and to interior, and platforms at each end of each transit shed. Open areas at rear used for container storage as described under Ref. No. 15, storage warehouse (S.W. Ref. No. 7) and 5.5 acres of general open storage area all located at rear.			Terminal has space for loading 30 trucks.		

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River (Town Creek)

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	19 Dock Code No. 919	20 Dock Code No. 919	21 Dock Code No. 865
NAME	Marine Contracting & Towing Co. Wharf.	Seahol Contracting Co.	Exxon Company, U.S.A. Wharf and Barge Dock.
LOCATION ON WATERFRONT	Above Silas N. Pearman - Grace Memorial Highway Bridges.	Approximately 250 feet above Silas N. Pearman - Grace Memorial Highway Bridges.	Right bank of Cooper River, below entrance to Shipyard River.
OWNED BY	Seahol Contracting Co.	Seahol Contracting Co. and County of Charleston.	Exxon Company, U.S.A.
OPERATED BY	Marine Contracting & Towing Co.	Seahol Contracting Co.	do.
PURPOSE FOR WHICH USED	Mooring tugboats and harbor-bunkering barges; mooring vessels for repair.	Mooring barges and vessels for repair.	Receipt and shipment of asphalt and petroleum products; bunkering vessels; loading barges for bunkering vessels at berth.
TYPE OF CONSTRUCTION	Concrete pile, concrete-decked, offshore wharf with 178- by 12-foot approach to lower end; fronted by timber fender system.	Timber pile, concrete-decked offshore wharf with 90- by 12-foot approach, fronted by 9 timber mooring dolphins. (See Remarks.)	Concrete-filled, steel pipe pile, concrete-decked, offshore wharf with 1,543 by 30-foot approach supporting pipelines and 3.5-foot wide walkway; one 90- by 11-foot breasting platform

DESCRIPTION	19 Face	19 Lower side	19 Upper side	20 Face	20 Lower side	20 Upper side	21 Face	21 Lower side	21 Upper side
Dimensions (Feet)	168	190	12+178	45	10	10	72.6	42.5	42.5
Depth Alongside at MLW Do.	40	0-40	8-25	20	-	-	38	-	-
Usable Berthing Space Do.	168 (See Remarks)	160	170	540 w/dolph (See Remarks.)		-	720 w/breasting platforms.		-
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	12			12			10		
Load Capacity per Sq.Ft. (Lbs.)	200			-			1,000		
Lighted or Unlighted	Lighted.			Unlighted.			Lighted.		

TRANSIT SHEDS	None.	None.	None.
Number and Type of Construction			
Length and Width (Feet)			
Height Inside Do.			
Floor Area for Cargo (Sq.Ft.)			
Load Capacity per Sq.Ft. (Lbs.)			
Cargo Doors			
MECHANICAL HANDLING FACILITIES	One 25-ton diesel mobile crane with 90-foot boom and three 5-ton, electric, mobile cranes, each with 25-foot boom.	Use of mobile equipment described under Ref. No. 19.	Wharf: One 2-ton, electric, hose-handling derrick with 30-foot boom mounted on top of high steel frame tower which supports pipeline manifold system and flexible hose connections; one 12- and one 10-inch, swivel-jointed, loading arms. Barge dock: One 6-inch swivel-jointed loading arm, one mast-and-boom derrick with traveling electric hoist on 16-foot boom for handling hose; and one hand-operated davit for handling drums.
RAILWAY CONNECTIONS	None.	None.	Terminal trackage serving 31-car capacity tank car loading rack connects with Seaboard Coast Line Railroad.
HIGHWAY CONNECTIONS	Via Immigration Street, asphalt, 30 feet wide, from Columbus Street, asphalt, 24 feet wide.	Same as Ref. No. 19.	Via Greenleaf Street, asphalt, 20-15 feet wide, from Meeting Street (U.S. Highway No. 52), asphalt, 60 feet wide.
WATER SUPPLY (Available to Vessels)	Through one 3-inch line with 2½-inch hose connections.	Same as Ref. No. 19.	Through one 6-inch line (wharf) and one 2-inch line (barge dock), all with 2½-inch hose connection.
ELECTRIC CURRENT (Available to Vessels)	A.C., 110/220 volts, single-phase, 60-cycle.	Same as Ref. No. 19.	A.C., 110 volts, single-phase, 60-cycle; A.C., 440 volts, 3-phase, 60-cycle.
FIRE PROTECTION (Other than City)	Hydrant, hose, pump, and hand extinguishers.	Same as Ref. No. 19.	Fireline with monitor nozzles and hydrants, hose reels, foam generators, chemical carts, and watchmen.
REMARKS	Additional 156 feet berthing space available at rear of face with 25-foot depth of water. A 2-story, steel building located at rear; Seahol Contracting Co. operates marine repair plant on ground floor, and Marine Contracting & Towing Co. uses 2d floor for dispatch office. Vessel and barge building and launching ways located at lower side of wharf.	Row of timber mooring dolphins spaced approximately 50 feet apart extend along shore from upper side of inner end of approach, to below entrance to Market Creek providing approximately 1,700 feet of mooring in depths of 8 to 20 feet of water. Two parallel 180-foot timber-decked concrete piers spaced 35 feet apart at rear of upper side will serve a 400-ton diesel-hydraulic vertical boat lift under construction at time of survey.	One 20-, one 18-, three 16-, two 12-, four 10-, and one 8-inch pipelines extend from wharf; and two 6-, and two 3-inch pipelines extend from barge dock to 169 steel storage tanks at petroleum terminal in rear, total capacity 2,985,200 barrels. Ships are bunkered through one 12-inch pipeline on wharf at maximum rate of 1,800 barrels per hour; and barges are loaded through one 6-inch pipeline on barge dock at maximum rate of 1,500 barrels per hour; 3-inch compressed air and 2-inch steam lines serve wharves.

Corps of Engineers Port Code No. 12213

REFERENCE NUMBER ON MAP	22 Dock Code No. 990	23 Dock Code No.985	24 Dock Code No. 975
NAME	Shipyard River Terminals Wharf.	Gulf Oil Co.-U. S. Wharf.	Salmons Dredging Wharf.
LOCATION ON WATERFRONT	Above junction with Cooper River.	Approximately 0.3 mile above junction with Cooper River.	Approximately 0.5 mile above junction with Cooper River.
OWNED BY	Shipyard River Terminal, Division of Burris Chemical, Inc.	Gulf Oil Co.-U. S., Division of Gulf Oil Corp.	Richard W. Salmons.
OPERATED BY	do.	do.	Salmons Dredging Corp. and Braswell Shipyards, Inc.
PURPOSE FOR WHICH USED	Lower section of wharf: Receipt and shipment of liquid and dry bulk products; upper section: Mooring vessels.	Receipt of petroleum products; bunkering vessels.	Mooring company-owned floating equipment; handling construction materials and supplies, mooring vessels for repair.
TYPE OF CONSTRUCTION	Lower section: Concrete-filled, steel pipe pile, concrete-decked wharf; upper section: Timber pile, timber-decked, offshore wharf continuous with and at angle to lower section. A curved, timber rail trestle extends from shore to upper end of timber-decked rail (Continued under Remarks)	Concrete pile, concrete-decked offshore wharf with 2 timber-fendered, concrete breasting dolphins in line with face, a 20- by 4-foot concrete walkway extends to each from steel sheet pile bulkhead with solid fill at rear.	Timber pile, concrete-decked wharf; 4 timber mooring dolphins in line with lower 60-foot portion of face.

DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	390+400	52	30	130	20	20	510+60	40+28	40
Depth Alongside at MLW Do.	35	-	-	38	-	-	18-30	25	-
Usable Berthing Space Do.	390+400	-	-	300 w/dolphs. (See Remarks)		-	510+260 w/dolphs.		-
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	14			13			10		
Load Capacity per Sq.Ft. (Lbs.)	-			600			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									

MECHANICAL HANDLING FACILITIES	One 16-ton, electric, traveling, full-portal, gantry crane on lower 390-foot section of wharf; crane equipped with hinged cantilever boom with 40-foot outboard reach, a 7½-cubic yard, traveling bucket, and a steel receiving hopper which serves a 48-inch, low-level, electric belt conveyor extending along rear of face of wharf; unloading capacity of crane 700 tons per hour. Cranes can unload bulk materials from vessels to open rail cars at rear, or to storage warehouses via covered, inclined, electric, belt-conveyor system extending from low-level conveyor on wharf. Two 3-, one 2-, and four 1-cubic yard, diesel front end loaders, and five diesel bulldozers serve storage and loading area at rear.	One 8-ton hydraulic, revolving, pedestal crane with 56-foot telescopic boom.	Salmons Dredging Corp.: One 15-ton, diesel, crawler crane with 50-foot boom; and one 4-ton, electric, mobile cranes, each with 28-foot telescopic boom. Braswell Shipyards, Inc.: Use of mobile equipment described under Ref. No. 5 and rental equipment as required.
RAILWAY CONNECTIONS	Tracks serving terminal at rear connect with Southern Railway System and Seaboard Coast Line Railroad.	Three parallel surface tracks serve 14-car capacity tank car loading rack and platform-level tracks at canning plant in rear; connect with Seaboard Coast Line Railroad.	None.
HIGHWAY CONNECTIONS	Via Milford Street, asphalt, 24 feet wide, and gravel, 12 feet wide, from Meeting Street.	Via private road, concrete and unimproved, various widths, from Milford Street, asphalt, 24 feet wide.	Via Cherry Hill Lane, gravel, various widths, from Meeting Street (U.S. Highway No. 52), asphalt, 60 feet wide.
WATER SUPPLY (Available to Vessels)	Through one 4-inch line with 2½-inch hose connection.	Same as Ref. No. 22.	Same as Ref. No. 22.
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 440 volts, 3-phase, 60-cycle.	None.	A.C., 110 volts, single-phase, 60-cycle; A.C., 220/440 volts, 3-phase, 60-cycle.
FIRE PROTECTION (Other than City)	Hydrants, hose, hand extinguishers, and watchmen.	Hydrants, hose, chemical carts, hand extinguishers, and watchmen.	Portable and fixed pumps, hydrant, hose, hand extinguishers, and watchmen.
REMARKS	trestle extending along rear of lower 390-foot section of wharf. Trestle not in useable condition at time of survey. Three buildings located in rear used as bulk materials storage warehouses (See S.W. Ref. No. 10). Plant in rear has electric bagging machines which have a total capacity for 1,000 tons per day, and 73-inch crusher mill with capacity of 20 tons per hour. Three 10-inch pipelines extend from wharf to 6 steel storage tanks at rear, total capacity 250,000 barrels. Approximately 25 acre open storage area at rear.	Buildings in rear used for canning plant and storage warehouses. One 12-, three 8-, twelve 6-, and eleven 4-inch pipelines extend from wharf to 46 steel storage tanks at terminal in rear, total capacity 705,000 barrels. Tankers 680 feet long berth at wharf.	Marine contractor's storage yard and marine repair shops located in rear. Additional 350 feet of berthing space with 10-foot depth of water is available at row of 11 timber mooring dolphins on opposite side of river directly across from wharf.

Corps of Engineers Port Code No. 12213 — 12212

REFERENCE NUMBER ON MAP	25 Dock Code No. 970			26 Dock Code No. 965			27 Dock Code No. 730		
NAME	Union Carbide Corp. Pier.			MACALLOY Corp. Wharf.			Amerada Hess Corp. South Terminal Wharf.		
LOCATION ON WATERFRONT	Right bank of Shipyard River, approximately 0.6 mile above junction with Cooper River.			Right bank of Shipyard River, approximately 0.8 mile above junction with Cooper River.			Right bank of Cooper River, approximately 0.2 mile below foot of Montague Avenue extended.		
OWNED BY	Union Carbide Corp.			MACALLOY Corporation.			Amerada Hess Corporation.		
OPERATED BY	Not operated.			do.			Not operated. (See Remarks.)		
PURPOSE FOR WHICH USED	Not used.			Receipt of ore by self-unloading vessels, and coke by barge; shipment of ferro-alloys by vessel.			Not used.		
TYPE OF CONSTRUCTION	Timber pile, timber-decked pier; 2 timber mooring dolphins in line with face.			Timber pile, timber-decked, offshore wharf with 42- by 30-foot timber approach; 2 timber mooring dolphins on upper side and one on lower side, all in line with face. A 273- by 20-foot, timber pile, timber-decked rail trestle extends from shore to upper side.			Timber pile, timber-decked, offshore wharf with 283- by 12-foot approach supporting pipelines and walkway; one timber pile cluster, one timber pile, concrete-capped, and 2 steel sheet pile, solid-filled, concrete-surfaced, cylindrical, mooring dolphins in line with face.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	12	70	70	500	32	32	60	31	31
Depth Alongside at MLW Do.	18	-	-	32	-	-	37	-	-
Usable Berthing Space Do.	100 w/dolphs	-	-	545 w/dolphs	-	R.R. trestle	520 w/dolphs	(See Remarks)	-
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	9			11			11.5		
Load Capacity per Sq.Ft. (Lbs.)	-			1,000			-		
Lighted or Unlighted	Unlighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	None.			Carolina Shipping Co. (Stevedores): Seven diesel mobile cranes, each equipped with 3-cubic yard clamshell buckets; 2 have lift capacities of 80 tons with up to 100-foot booms and 5 have lift capacities of 30 tons with 50- and 70-foot booms. Cranes load 9 specially designed, rail dump cars which are transferred by one of three 44-ton, diesel locomotives to open storage area in rear. Several 1- to 2-cubic yard front end loaders available for cleaning out ships' holds.			One hand-operated, mast-and-boom derrick with 20-foot boom for handling hose.		
RAILWAY CONNECTIONS	None.			Two surface tracks on wharf, total length 1,000 feet, join additional trackage serving plant in rear; connect with Seaboard Coast Line Railroad.			Three surface tracks serve 9-car capacity, tank car loading rack in rear; connect with tracks of North Charleston Railway Terminal Co.		
HIGHWAY CONNECTIONS	Via Cherry Hill Lane, gravel, various widths, from Meeting Street (U.S. Highway No. 52), asphalt, 60 feet wide.			Via road, asphalt, 10 feet wide, from Pittsburgh Avenue, asphalt, 18 feet wide.			Via private road, concrete, 20 feet wide, from Virginia Avenue, asphalt, 25 feet wide.		
WATER SUPPLY (Available to Vessels)	None.			Through one 3-inch line.			Through one 3-inch line.		
ELECTRIC CURRENT (Available to Vessels)	None.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220/440 volts, 3-phase, 60-cycle.			A.C., 220 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	None.			Hydrants, hose, 6-inch fireline, water barrels and pails, and watchmen.			Hydrants, hose, chemical carts, and hand extinguishers.		
REMARKS	-			Ferro-alloy reduction plant and approximately 147 acres of open storage area for ore and coke in rear.			Reciprocal berthing agreement with operator of Ref. No. 28 allows berthing of 600-foot vessels when wharf is operational. Two 10- and seven 8-inch pipelines extend from wharf to 19 steel storage tanks at terminal in rear, total capacity 462,000 barrels. At time of survey wharf was inactive and pipelines were blanked-off at wharf. Tanks at rear are connected to Amerada Hess Corp. North Terminal Wharf (Ref. No. 33).		

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	28 Dock Code No. 717			29 Dock Code No. 713			30 Dock Code No. 710		
NAME	American Petrofina Wharf.			Chem-Marine Corporation Wharf.			Shell Oil Co. Wharf.		
LOCATION ON WATERFRONT	Approximately 0.1 mile below foot of Montague Avenue extended.			Below foot of Montague Avenue extended.			Above foot of Montague Avenue extended.		
OWNED BY	American Petrofina Company of Texas.			Maybank Trust.			Shell Oil Co.		
OPERATED BY	do.			Chem-Marine Corporation.			do.		
PURPOSE FOR WHICH USED	Receipt of petroleum products.			Receipt of liquid chemicals and dry bulk materials, including alumina.			Receipt of petroleum products.		
TYPE OF CONSTRUCTION	L-shaped, offshore wharf fronted by 4 concrete mooring dolphins; upper 160-foot section and 60- by 45-foot approach are constructed of concrete-filled, steel pipe pile with concrete deck; lower 90-foot section: Timber pile with timber deck. Sections are connected by steps.			Concrete pile, concrete-decked offshore wharf fronted by timber fender system; 89- by 20-foot concrete roadway approach to upper end; 2 concrete mooring dolphins at rear.			Timber pile, timber-decked, offshore wharf with 160- by 12-foot approach supporting pipelines and 5-foot walkway; 2 timber and 2 steel pile, concrete-capped, breasting dolphins in line with face; timber walkways extend from sides along rear of dolphins.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	250	21+50	60	520	50	50	36	36	36
Depth Alongside at MLW Do.	35	0-35	0-35	35	-	-	39	-	-
Usable Berthing Space Do.	550 w/breasting dolphs. (See Remarks)			700 w/dolphs.	-	-	250 w/dolphs. (See Remarks)		-
Width of Apron Do.	Open.			20			Open.		
Height of Deck Above MLW Do.	11.5, concrete deck; 16.5, timber deck			14			13		
Load Capacity per Sq.Ft. (Lbs.)	500, concrete deck; 300, timber deck.			400			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Two hand-operated, mast-and-boom derricks, each with 20-foot boom for handling hose.			Electric, traveling, full portal, gantry tower equipped with 30-inch pneumatic unloading arm having 85-foot reach loads material into hopper on tower served by 42-inch electric belt conveyor system extending along center of wharf. Conveyor system continues from lower side via part inclined steel frame to 2 alumina storage silos at rear, total capacity 35,000 tons. Gantry travels 480 feet along wharf. One 8-inch pipeline unloading arm handles liquid chemicals.			Two pneumatically-operated, mast-and-boom derricks, each with two 35-foot booms for handling hose.		
RAILWAY CONNECTIONS	None.			Two surface tracks at rear serving tank car loading rack connect with tracks of North Charleston Railway Terminal Co.			None.		
HIGHWAY CONNECTIONS	Via private road, asphalt, 25 feet wide, from foot of Montague Avenue, asphalt, 60 feet wide.			Via private road, asphalt, 22 feet wide from foot of Montague Avenue, asphalt, 60 feet wide.			Via Virginia Avenue, asphalt, 25 feet wide, from Montague Avenue, asphalt, 60 feet wide.		
WATER SUPPLY (Available to Vessels)	Through one 4-inch line with 2-inch hose connections.			Through 2-inch line.			None.		
ELECTRIC CURRENT (Available to Vessels)	None.			None.			None.		
FIRE PROTECTION (Other than City)	Foam generator, hose reels, hand extinguishers, and water lime.			Two monitors on wharf, hydrant, hose and hand extinguishers.			Hand extinguishers and equipment serving Ref. No. 31.		
REMARKS	Reciprocal berthing agreement with operator of Ref. No. 27 permitting use of steel sheet pile breasting dolphins, allows for berthing of 600-foot vessels. Concrete-cribbed bulkhead with solid fill along shore at rear. One 10- and seven 8-inch pipelines extend from lower timber section of wharf via pipeline trestle to 9 steel storage tanks in rear, total capacity 296,000 barrels.			One 10-inch pipeline extends from wharf to two steel chemical storage tanks at rear, total capacity 90,000 barrels. At time of survey terminal was under construction and is described as it will appear and be operated upon completion.			Reciprocal berthing agreement with operator of Ref. No. 31 allows berthing of 670-foot vessels. One 12-, two 10-, and one 8-inch pipelines extend from wharf to 5 steel storage tanks in rear, total capacity 282,800 barrels.		

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	31 Dock Code No. 709			32 Dock Code No. 702			33 Dock Code No. 696		
NAME	Texaco Wharf.			Marathon Oil Co. Wharf.			Amerada Hess Corporation North Terminal.		
LOCATION ON WATERFRONT	Approximately 0.2 mile above foot of Montague Avenue extended.			Approximately 0.4 mile above foot of Montague Avenue extended.			Approximately 0.5 mile above foot of Montague Avenue extended.		
OWNED BY	Texaco, Inc.			Marathon Oil Co., Inc.			Amerada Hess Corporation.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Receipt of petroleum products by vessel.			Receipt of petroleum products.			Receipt and shipment of petroleum products; bunkering tank vessels using wharf.		
TYPE OF CONSTRUCTION	Steel pile, concrete-decked, offshore wharf with 110- by 17-foot approach supporting pipelines and 12-foot walkway; fronted by steel and timber fender system; 3 timber mooring dolphins in line with face. (Continued under Remarks.)			Timber pile, timber-decked, offshore wharf with 255- by 15-foot approach supporting pipelines and 5-foot walkway; four 15- by 7-foot, steel pile, concrete-capped, breasting dolphins with timber fenders in line with face. Timber walkways extend from sides of wharf to 2 inner breasting dolphins.			Part steel sheet pile cell with solid fill, part steel pile, concrete-decked, offshore wharf with 225- by 20-foot catwalk and pipeline approach; 3 steel pile, concrete-capped breasting dolphins in line with face connected by catwalk.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	142	32	32	50	33	33	68	27	27
Depth Alongside at MLW Do.	33	-	-	35	-	-	38	-	-
Usable Berthing Space Do.	257 w/dolphs. (See Remarks)	-		275 w/dolphs.	-	-	350 w/dolphs. (See Remarks)		
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	13			14			12.5		
Load Capacity per Sq.Ft. (Lbs.)	500			400			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Steel tower on wharf having 3 pneumatically operated, 18-foot, hinged booms supporting a total of 10 flexible hose connections.			One electric, mast-and-boom derrick with 25-foot boom for handling hose.			One electric, mast-and-boom derrick with 30-foot boom for handling hose.		
RAILWAY CONNECTIONS	Two surface tracks serve 8-car capacity, tank car loading rack, and 2 platform-level tracks serve buildings; connect with tracks of North Charleston Terminal Co.			None.			Two surface tracks serve 6-car capacity tank car loading rack in rear; connect with tracks of North Charleston Terminal Co.		
HIGHWAY CONNECTIONS	Via Virginia Avenue, asphalt, 25 feet wide, from Montague Avenue, asphalt, 60 feet wide.			Via private road, gravel, 12 feet wide, from Virginia Avenue, asphalt, 25 feet wide.			Via plant roads (Cook Avenue and Bentley Boulevard-both access), asphalt, 20-30 feet wide, from Virginia Avenue, asphalt, 30 feet wide.		
WATER SUPPLY (Available to Vessels)	Through one 3-inch line with 2½-inch hose connections.			Through one 4-inch line with 2½-inch hose connections.			None.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 240 volts, 3-phase, 60-cycle.			A.C., 110 volts, single-phase, 60-cycle.			None.		
FIRE PROTECTION (Other than City)	Chemical carts, hydrants, hose, and hand extinguishers.			Hydrants, hose, and hand extinguishers.			Hydrant, hose, and hand extinguishers.		
REMARKS	Timber walkway extending from lower side is continuation of walkway described under Ref. No. 30; timber pile, timber-decked walkway extends from shore to platform at upper mooring dolphin; reciprocal berthing agreement with operator of Ref. No. 30 allows berthing of 670-foot vessels. Drumming and canning plant and private storage warehouse located in buildings behind timber bulkhead with solid fill in rear. Three 10-, three 8-, and seven 6-inch pipelines extend from wharf to 25 steel storage tanks in rear, total capacity 319,000 barrels.			Dock house (8 by 10 feet) located 12 feet in rear of wharf along lower side of approach. One 12- and one 10-inch pipelines equipped with check valves at inner end of approach extend to 9 steel storage tanks, total capacity 485,500 barrels; tanks are located at terminal on opposite side of Virginia Avenue.			Three 10-inch pipelines extend from wharf to 13 steel storage tanks in rear, total capacity 770,000 barrels. Additional storage at Amerada Hess Corporation South Terminal (Ref. No. 27) connected through terminal storage at rear. A 600-foot vessel can berth at wharf.		

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River

Corps of Engineers Port Code No. 12212

REFERENCE NUMBER ON MAP	34 Dock Code No. 679	35 Dock Code No. 675	36 Dock Code No. 670
NAME	Westvaco Corp., Barge Wharf.	Westvaco Corp. Wharf.	State Pier 15, North Charleston Terminal, Berth 1.
LOCATION ON WATERFRONT	Approximately 0.4 mile above mouth of Filbin Creek.	Approximately 1.0 mile below mouth of Goose Creek.	Approximately 0.9 mile below mouth of Goose Creek.
OWNED BY	Westvaco Corp., Kraft Division.	Westvaco Corp., Kraft Division.	South Carolina State Ports Authority.
OPERATED BY	Not operated.	do.	do.
PURPOSE FOR WHICH USED	Not used.	Shipment of paper products.	Receipt and shipment of general cargo in foreign and domestic trades.
TYPE OF CONSTRUCTION	Irregular-shaped, timber pile, concrete-decked, offshore wharf with 100- by 20-foot approach from timber bulkhead with solid fill; 11 timber mooring dolphins in line with face, connected by 5-foot wide, concrete beam catwalk.	Concrete pile, concrete-decked wharf with timber pile apron extension; part concrete and part timber deck; timber mooring dolphin on lower side in line with face.	Concrete pile, concrete-decked wharf extending from timber bulkhead with solid fill; fronted by timber fender system.

DESCRIPTION	Face	Lower side	Upper side	Face	Lower side		Face		
Dimensions (Feet)	57	57+15	22+48	480	20+10+10		600		
Depth Alongside at MLW Do.	12	-	-	28	-		35		
Usable Berthing Space Do.	677 w/dolphs.	-	-	650 w/dolphs	-		600 (See Remarks)		
Width of Apron Do.	Open.			40			87 and 110		
Height of Deck Above MLW Do.	12			12			12		
Load Capacity per Sq.Ft. (Lbs.)	350			500			600		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None. (See Remarks.)			Three: Steel frame, concrete floors supported by concrete piles; one metal siding; two open sides.		
Number and Type of Construction							Bldg. 552	lumber sheds	
Length and Width (Feet)							548 by 595	120 by 80, each.	
Height Inside Do.							20	20	
Floor Area for Cargo (Sq.Ft.)							245,000 net.	14,400 net, total.	
Load Capacity per Sq.Ft. (Lbs.)							500	500	
Cargo Doors							Bldg. 552: Shipside; seven 20- by 18-foot; rear, four 16- by 18-foot.		

MECHANICAL HANDLING FACILITIES	None.	Stevedore equipment available as required.	One diesel-electric, traveling, revolving, level-luffing, gantry crane, capacity 30-tons at 34-foot outboard reach, and 15-short tons at 64-foot outboard reach. Crane travels 2,460 feet along wharf to also serve berths 2 and 3 (Ref. No. 37). One 12½- and one 11½-ton, diesel fork lift trucks; seventy-two 2½- to 5-ton gasoline, LP gas or diesel lift trucks, equipped with various forks, clamps or jute rams. Use of mobile cranes described under Ref. No. 10. Additional equipment provided by stevedoring companies.
RAILWAY CONNECTIONS	Plant trackage in rear connects with tracks of North Charleston Terminal Co.	None.	South Carolina Public Railroads Commission: Two connecting surface tracks on apron, total length 2,400 feet; and 3 platform-level tracks between Warehouses C and D and E and F, total length 5,600 feet; connect with additional terminal trackage in rear.
HIGHWAY CONNECTIONS	Via plant roads (Cook Avenue and Bentley Boulevard-both access), asphalt, 20-30 feet wide, from Virginia Avenue, asphalt, 30 feet wide.	Via plant roads, asphalt, 20 to 30 feet wide, from Virginia Avenue, asphalt, 30 feet wide.	Via terminal roadways, paved, 20 to 30 feet wide, from Remount Road, asphalt, 26 feet wide.
WATER SUPPLY (Available to Vessels)	Through one 2-inch line.	Through four 2½-inch lines with hose connections.	Through one 6-inch line with 2½-inch connections.
ELECTRIC CURRENT (Available to Vessels)	None.	None.	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.
FIRE PROTECTION (Other than city)	Hydrant, hose, hand extinguishers, and watchmen.	Sprinkler system in buildings at rear and under wharf, and hose and watchmen.	Sprinkler system in transit shed and warehouses, A.D.T. service, hydrants, hose, one 200,000-gallon water tower, and one 1,500- and one 250-gallon per minute pumps.
REMARKS	Papermill located at rear.	Face of wharf is in line and contiguous with faces of Berths 1, 2 and 3 (Ref. Nos. 36 and 37). Buildings at rear used for paper manufacturing plant and storage.	Face of wharf is in line and contiguous with faces of Westvaco Wharf and Berths 2 and 3 (Ref. Nos. 35 and 37). Warehouses C, D, E, and F at rear of transit shed are used as public storage warehouses (S.W. Ref. No. 12). Use of container open storage area described under Ref. No. 37 as required for general cargo. Fumigation plant with 3 vacuum chambers located between Warehouses D and E. Trucks have access to interior of transit shed and to wharf apron.

PIERS, WHARVES, AND DOCKS

Right bank, Cooper River

Corps of Engineers Port Code No. 12212							12219		
REFERENCE NUMBER OR MAP	37 Dock Code No. 655			38 Dock Code No. 690			39 Dock Code No. 860		
NAME	State Pier 16, North Charleston Terminal, Berths 2 and 3.			South Carolina State Ports Authority, Grain Wharf.			General Dynamics Corp. Barge Slip.		
LOCATION OR WATERFRONT	Approximately 0.7 mile below mouth of Goose Creek.			Approximately 0.5 mile below mouth of Goose Creek.			Approximately 6.3 miles above lower outlet of Back River.		
OWNED BY	South Carolina State Ports Authority.			South Carolina State Ports Authority.			General Dynamics Corporation.		
OPERATED BY	do.			South Carolina Farm Bureau Marketing Association.			do.		
PURPOSE FOR WHICH USED	Receipt and shipment of containerized cargo in foreign and domestic trades.			Shipment of grain.			Shipment of fabricated liquefied natural gas tanks by barge.		
TYPE OF CONSTRUCTION	Concrete pile, concrete-decked wharf extending from steel sheet pile bulkhead with asphalt-surfaced solid fill; fronted by timber fender system.			Prestressed concrete pile, concrete-decked, offshore wharf with 150- by 14-foot concrete approach to upper side; timber catwalk extends to Berth 3 (Ref. No. 37) from lower side.			Barge slip: lower side; concrete-capped, steel sheet pile bulkhead with part concrete-surfaced solid fill; upper side; concrete-capped concrete pile pier; head of slip natural bank. Rubber fender system fronts sides of slip; and timber mooring dolphin each side of entrance.		
DESCRIPTION	Face	Upper side		Face	Lower side	Upper side	Slip: Lower side	Slip: Head	Slip: Upper side
Dimensions (Feet)	1,860	60		380	8	8	302	110	260
Depth Alongside at MLW Do.	35	-		35	-	-	7	-	-
Usable Berthing Space Do.	1,860	-		380	-	-	One barge can berth in slip.		
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	12			12			6		
Load Capacity per Sq.Ft. (Lbs.)	1,000			400			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHED	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Three 40-long ton, diesel-electric, traveling, container handling cranes, each with 128-foot hinged-cantilevered boom having 103-foot outboard reach; 2 lower & 1 upper crane have 61- and 51-foot backreach, 224.5- and 214.5-foot container travel length and 72.5- and 82.5-foot hoist height above apron, respectively. Cranes have an operating rate of 30 containers per hour each, with a travel length of approximately 1,860 feet. One 40- and three 35-ton diesel-hydraulic traveling top-lift container handlers capable of stacking containers 2 and 3 high, respectively. Use of gantry crane described under Ref. No. 36, and mobile cranes described under Ref. No. 10.			Grain gallery extends full length of wharf along rear of face with 5 vessel-loading spouts, combined loading rate 15,000 bushels per hour. One 42-inch, electric belt conveyor serves gallery through approach gallery to lower end from grain elevator on shore at rear.			Two 1,200-ton, diesel-hydraulic, mobile transporters; one 150-ton diesel crawler crane with 150-foot boom and 30-foot jib; one 150- and one 100-ton diesel crawler crane, each with 150-foot boom; one 30- and one 14-ton diesel mobile crane with 40- and 30-foot telescopic booms, respectively; and one 3-ton, diesel fork lift truck.		
RAILWAY CONNECTIONS	South Carolina Public Railroads Commission: Two surface tracks on apron, total length 1,860 feet; connect with additional terminal trackage in rear.			South Carolina Public Railroads Commission: Two surface tracks serve hopper car receiving pit, and 4 car-loading spouts at rear of grain elevator.			Surface track serving plant at rear connects with Seaboard Coast Line Railroad.		
HIGHWAY CONNECTIONS	Via terminal roadways, paved, 20 to 30 feet wide, from Remount Road, asphalt, 26 feet wide.			Via terminal roadways, paved, 20-30 feet wide, from Remount Road, paved.			Via roadway, asphalt, 20 feet wide, from Red Bank Road (State Secondary Road 29) asphalt, 22 feet wide, from U.S. Routes 52 and 78.		
WATER SUPPLY (Available to Vessels)	Through one 6-inch line with 2½-inch connections.			Through one 6-inch line with 2½-inch hose connections.			None.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			None.			A.C., 440 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	Sprinkler system in transit shed and warehouses, A.D.T. service, hydrants, hose, one 200,000-gallon water tower, and one 1,500- and one 250-gallon per minute pumps.			Chemical carts, hydrants, hose, and a 200,000-gallon water tower with automatic pump.			None.		
REMARKS	Approximately 95-acre storage area at rear including maneuvering areas and storage space for 3,933 containers; additional 9-acre storage area. Two storage warehouses (S.W. Ref. Nos. 13 and 14) are located at rear.			Grain elevator in rear consisting of 50 silos with 27 interstitial spaces, and 8 bins has total storage capacity of 1,460,000 bushels.			LNG tank fabrication plant and yard at rear.		

Corps of Engineers Port Code No.12219

REFERENCE NUMBER ON MAP	40 Dock Code No. 870	41 Dock Code No. 870	42 Dock Code No. 870
NAME	Combustion Engineering Corp. Barge Slip.	South Caroline Electric and Gas Co. Wharf.	Atlantic Wood Products Co. Wharf.
LOCATION ON WATERFRONT	Right bank of Cooper River approximately 6.4 miles above lower outlet of Back River.	Right bank of Cooper River approximately 6.7 miles above lower outlet of Back River.	Childsbury, S.C., left bank of West Branch Cooper River approximately 1,200 feet below Seaboard Coast Line Railroad Bridge.
OWNED BY	Combustion Engineering, Inc.	South Carolina Electric and Gas Company.	Atlantic Wood Products Co., Inc.
OPERATED BY	do.	do.	do.
PURPOSE FOR WHICH USED	Receipt of nuclear reactors and plant machinery by barge. (See Remarks.)	Receipt of fuel oil for plant consumption.	Shipment of creosoted wood products.
TYPE OF CONSTRUCTION	Barge slip consisting of concrete-capped, steel sheet pile bulkhead with part concrete-surfaced fill.	Concrete pile, concrete-decked offshore wharf with 140- by 12-foot concrete roadway approach; 2 concrete and 6 timber breasting dolphins in line with face; 2 mooring dolphins at rear.	Timber pile, timber-decked offshore wharf with 48- by 25-foot approach extending from timber bulkhead with solid fill; 4 timber breasting dolphins in line with face.
DESCRIPTION	Slip	Face / Lower side / Upper side	Face / Upper side / Lower side
Dimensions (Feet)	350 by 60	30 / 20÷20 / 20÷20	57 / 26 / 26
Depth Alongside at MLW Do.	11	34 / - / -	7 / - / -
Usable Berthing Space Do.	One barge can berth in slip.	600 w/dolphs / - / -	150 w/dolphs / - / -
Width of Apron Do.	Open.	Open.	Open.
Height of Deck Above MLW Do.	6.0	15.0	14.0
Load Capacity per Sq.Ft. (Lbs.)	-	-	-
Lighted or Unlighted	Lighted.	Lighted.	Unlighted.
TRANSIT SHEDS	None.	None.	None.
Number and Type of Construction			
Length and Width (Feet)			
Height Inside Do.			
Floor Area for Cargo (Sq.Ft.)			
Load Capacity per Sq.Ft. (Lbs.)			
Cargo Doors			
MECHANICAL HANDLING FACILITIES	See remarks.	One 12-inch swivel-jointed pipeline unloading arm.	Rental equipment available as required.
RAILWAY CONNECTIONS	One surface track extending along each side of slip connects with Seaboard Coast Line Railroad.	Track serving plant at rear connects with Seaboard Coast Line Railroad.	None.
HIGHWAY CONNECTIONS	Via roadway, asphalt, 20 feet wide, from Red Bank Road (State Secondary Road 29) asphalt, 22 feet wide, from U.S. Routes 52 and 78.	Same as Ref. No. 40.	Via gravel road, various widths, from State Secondary Road 44, asphalt, 20 feet wide, from U.S. Route 17A, asphalt, 24 feet wide.
WATER SUPPLY (Available to Vessels)	None.	Through 2-inch line.	None.
ELECTRIC CURRENT (Available to Vessels)	None.	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.	None.
FIRE PROTECTION (Other than City)	None.	Through 6-inch fire line, hand extinguishers, and watchmen.	None.
REMARKS	At time of survey slip was under construction and is described as it will appear and be operated upon completion. Reactors will be transferred from barge to railroad flat cars via cranes integral with rail cars.	Two 12-inch pipelines extend from wharf to 4 steel storage tanks at rear, total capacity 1,300,000 barrels.	-

Corps of Engineers Port Code No. 12219							12212		
REFERENCE NUMBER ON MAP	43 Dock Code No. 064			44 Dock Code No. 064			45 Dock Code No. 215		
NAME	Amoco Chemicals Corporation Barge Slip.			Amoco Chemicals Corporation Tanker Wharf.			Cape Romain Contractors Pier. (12212-215 - Mouth of Clouter Creek.)		
LOCATION ON WATERFRONT	Left bank Grove Creek approximately 1.4 miles from dredged entrance to Cooper River located approximately 0.6 mile above lower outlet of Back River.			Left bank Cooper River approximately 4,800 feet below lower outlet of Back River.			Left bank Clouter Creek approximately 2.0 miles above lower entrance to Cooper River.		
OWNED BY	Amoco Chemicals Corporation.			Amoco Chemicals Corporation.			Cape Romain Contractors, Inc.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Receipt of plant equipment and machinery.			Receipt of petrochemicals and fuel oil for plant consumption.			Mooring company-owned floating equipment; handling construction materials and supplies to and from barges.		
TYPE OF CONSTRUCTION	Barge slip: upper side natural bank fronted by 6 timber mooring dolphins; head of slip and lower side, steel sheet pile bulkhead with solid fill; timber mooring dolphins front each side widened entrance to slip.			Concrete pile, concrete-decked offshore wharf with 6,314- by 38-foot angular concrete pipeline and roadway approach; 2 concrete breasting dolphins in line with face, fronted by timber fender system; 4 concrete mooring dolphins at rear. Concrete walkway from wharf connects dolphins.			Timber pile, timber-decked pier.		
DESCRIPTION	Slip			Face	Upper side	Lower side	Face	Upper side	Lower side
	Upper side	Head	Lower side						
Dimensions (Feet)	220	100	250	108	32	32	20	40	40
Depth Alongside at MLW Do.	12	12	12	-	-	-	6	-	-
Usable Berthing Space Do.	One barge can berth in slip.			800 w/dolphs	(See Remarks)		See Remarks.		
Width of Apron Do.	-			Open.			Open.		
Height of Deck Above MLW Do.	10			14.5			11		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Unlighted.			Lighted.			Lighted.		
TRANSIT SHED	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	None.			Three 12-inch swivel-jointed pipeline unloading arms.			Seven diesel crawler cranes: one 40-ton with 80-foot boom, one 25-ton with 75-foot boom, one 20-ton with 60-foot boom, two 15-ton with 45-foot boom each, one 12-ton with 35-foot boom, and one 8-ton with 30-foot boom. In addition, one diesel-electric, revolving crane with 120-foot boom on 100- by 54-foot barge, capacity 150-ton at 20-feet, 35-ton at 67-feet; and one 60-ton diesel crawler crane with 100-foot boom on 145- by 44-foot barge.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via roadway, asphalt, 20 feet wide, from Clements Ferry Road (State Secondary Road 98), from Cainhoy Road (State Secondary Road 33), from State Highway No. 41; all asphalt, 22 feet wide.			Same as Ref. No. 43.			Via dirt road, various widths, from Cainhoy Road (State Secondary Road 33), asphalt, 22 feet wide.		
WATER SUPPLY (Available to Vessels)	None.			None.			Through 1-inch line.		
ELECTRIC CURRENT (Available to Vessels)	None.			None.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	None.			Monitor, fire pump and chemical carts.			Hand extinguishers.		
REMARKS	Two covered boat houses located at inner end of upper side.			One 20-inch pipeline extends from wharf to 2 fuel oil storage tanks at rear, total capacity 200,000 barrels; one 18-inch pipeline extends from wharf to 2 petrochemical storage tanks at rear, total capacity 300,000 barrels. Wharf is serviced by 12-inch steam line, a 3,200-gallon spill retention tank, and spill retention floating boom. Wharf accommodates 661-foot tankers.			Berthing at pier for 150-foot barge with additional 300 feet of berthing along row of 5 timber mooring piles fronting natural bank on upper side in 8 feet of water.		

PIERS, WHARVES, AND DOCKS

Left bank, Wando River

Corps of Engineers Port Code No.				12216			12216		
REFERENCE NUMBER ON MAP	46 Dock Code No. -			47 Dock Code No. 724			48 Dock Code No. 724		
NAME	State Pier 41, Wando River Terminal Berths 1, 2 and 3.			Detyens Shipyards, Pier E.			Detyens Shipyards, Pier C.		
LOCATION ON WATERFRONT	Above mouth of Hobcaw Creek at foot of Long Point Road.			Wando, S.C., approximately 750 feet below State Highway 41 Bridge.			Wando, S.C., approximately 600 feet below State Highway 41 Bridge.		
OWNED BY	South Carolina State Ports Authority.			Detyens Shipyards, Inc.			Detyens Shipyards, Inc.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Receipt and shipment of containerized cargo in foreign and domestic trades.			Mooring vessels for conversion, outfitting, and repair; mooring floating drydock.			Mooring vessels for conversion, outfitting, and repair.		
TYPE OF CONSTRUCTION	Concrete pile, concrete-decked offshore wharf fronted by steel pile timber fender system. (See Remarks.)			Timber pile, timber-decked, offshore wharf with 160 by 24-foot approach to upper end; 5 steel pile, concrete-capped dolphins in line with face on lower side; 4 steel pile, concrete-capped dolphins in line with upper side of approach.			Timber pile, timber-decked pier.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	2,675	143	100	230	24	184	15	350	350
Depth Alongside at MLW Do.	35 (See Remarks)		-	27	-	17-28	-	18-22	18-22
Usable Berthing Space Do.	2,675	-	-	600 w/dolphs	-	120+360w/dolphs		350	350
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	16			12			12		
Load Capacity per Sq.Ft. (Lbs.)	1,000			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Four 40-long ton, diesel-electric, traveling, container handling cranes, each with 128-foot hinged-cantilevered boom having 103-foot outboard reach, 61-foot backreach, 226-foot container travel length, 82.5-foot hoist height above apron, travel length of approximately 2,600 feet, and an operating rate of 30 containers per hour, each.			One diesel-electric, 25-, and one electric, 15-ton, traveling, revolving full portal gantry cranes with 100-foot outboard reach on 300- by 20-foot, concrete pile craneway at rear of lower dolphins to serve floating Drydock No. 1 at rear. Two 25-ton, diesel mobile cranes, one with 90-foot, telescopic boom, one with 70-foot boom, and one 15-ton floating crane with 90-foot boom.			Use of mobile and floating equipment described under Ref. No. 47.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via Terminal roads, asphalt, 30 feet wide, from U.S. Highway 17 and Interstate Highway 526 (under construction).			Via driveway, gravel, various widths, from State Highway 41, macadam, 22 feet wide.			Same as Ref. No. 47.		
WATER SUPPLY (Available to Vessels)	Through 4-inch line with 2½-inch connections.			Through 12-, 8-, and 6-inch lines with 2½-inch connections.			Through 6-inch line with 2½-inch connections.		
ELECTRIC CURRENT (Available to Vessels)	See Remarks.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220/440 volts, 3-phase, 60-cycle; D.C., 110 volts.			Same as Ref. No. 47.		
FIRE PROTECTION (Other than City)	Water tower, pumps, hydrants, hose and hand extinguishers.			Fire pumps, hydrants, hose and watchmen.			Same as Ref. No. 47.		
REMARKS	At time of survey terminal was under construction and is described as it will appear and be operated upon completion. An 80-acre paved open storage area at rear will provide maneuvering area and storage space for approximately 3,400 containers on chassis, including 250 refrigerated and 100 hazardous containers; and a 100,000 square-foot container freight station is under construction. Future plans call for an additional 2,600-foot wharf on north side; paving an additional 100 acres to provide for a total of 6,000 containers on chassis including 500 refrigerated and 350 hazardous cargo chassis; break bulk cargo served by two 125,000 square foot transit sheds, each, with open storage area; roll-on, roll-off and railcar ferry docks. The depths alongside are to be deepened to 40 feet.			Floating Drydock No. 1, capacity 9,800 tons, is moored between row of 10 steel, H-pile, mooring dolphins, extending 500 feet along bank and rear of face, pool depth 42 feet. Pier is equipped with steam, compressed air, and diesel fuel lines. One 6-inch to 8-inch pipeline extends from wharf to a 750,000 gallon slop tank at rear.			Pier is equipped with steam, compressed air, and diesel fuel lines. One 4-inch pipeline extends from pier to slop tank described under Ref. No. 47.		

Corps of Engineers Port Code No. 12216				12211					
REFERENCE NUMBER ON MAP	49 Dock Code No. 724			50 Dock Code No. 030			51 Dock Code No. 035		
NAME	Detyens Shipyards, Piers A and B.			Thelning Wharf.			Tri-County Ice and Fuel Dock.		
LOCATION ON WATERFRONT	Wando, S.C., left bank Wando River, approximately 500 feet below State Highway 41 Bridge.			Mt. Pleasant, S. C., left bank Shem Creek, approximately 300 feet above mouth.			Mt. Pleasant, S. C., left bank Shem Creek, approximately 600 feet above mouth.		
OWNED BY	Detyens Shipyards, Inc.			J. C. Thelning.			Tri-County Ice and Fuel Co., Inc.		
OPERATED BY	Detyens Shipyards, Inc., Wando Division.			Wando Shrimp Co.			do.		
PURPOSE FOR WHICH USED	Mooring floating drydock.			Receipt of shrimp; mooring fishing boats.			Fueling, icing, and mooring fishing boats and other vessels.		
TYPE OF CONSTRUCTION	Two parallel, timber pile, timber-decked piers.			Timber pile, timber-decked, offshore wharf with 25- by 10-foot timber approach extending from seafood-processing and -packing plant at rear.			Timber pile, timber-decked, offshore wharf with 80- by 40-foot, part timber and part concrete approach.		
DESCRIPTION	Pier B	Pier A		Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	60 by 15	60 by 24		225	6	6	147	7	7
Depth Alongside at MLW Do.	23 (See Remarks)			7	-	-	7	-	-
Usable Berthing Space Do.	See Remarks.	-		225	-	-	147	-	-
Width of Apron Do.	Open.			7 and open.			Open.		
Height of Deck Above MLW Do.	12			9			9		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	Use of mobile and floating equipment described under Ref. No. 47.			One timber A-frame derrick with electric hoist for unloading shrimp.			None.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via driveway, gravel, various widths, from State Highway 41, macadam, 22 feet wide.			Via Haddrell and Wharf Streets and Live Oak Drive, asphalt, 16-20 feet wide, from U.S. Highway 17/701, asphalt, 50 feet wide.			Same as Ref. No. 50.		
WATER SUPPLY (Available to Vessels)	Each pier: through one 8-inch line with 2½-inch connections.			Through one 3/4-inch hose line.			Through 2-inch line.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220/440 volts, 3-phase, 60-cycle; D.C., 110 volts.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			Same as Ref. No. 50.		
FIRE PROTECTION (Other than City)	Fire pumps, hydrants, hose, and watchmen.			Hand extinguishers.			Water line.		
REMARKS	Piers equipped with steam, compressed air, and diesel fuel lines. Floating Drydock No. 4, capacity 1,000 tons moored end- to face of lower Pier B, pool depth 30 feet; and Floating Drydock No. 2, capacity 6,400 tons moored end- to face of upper Pier A, pool depth 42 feet. One 4-inch pipeline extends from each pier to slop tank described under Ref. No. 47.			-			One 1½-inch pipeline extends from 12,044-gallon fuel storage tank at rear to metered pump on wharf. One 6-inch ice-blowing line extends from ice house at rear to wharf.		

Corps of Engineers Port Code No. 12211

REFERENCE NUMBER ON MAP	52 Dock Code No.037			53 Dock Code No.042			54 Dock Code No. 048		
NAME	C.A. Magwood and Sons Wharf.			Mt. Pleasant Boat Building Co., Lower Wharf.			Mt. Pleasant Boat Building Co., Upper Wharf.		
LOCATION ON WATERFRONT	Approximately 750 feet above mouth.			Approximately 900 feet above mough.			Approximately 1,000 feet below U.S. Highway 17/701 Bridge.		
OWNED BY	C.A. Magwood & Sons, Inc.			Mt. Pleasant Boat Building Co., Inc.			Mt. Pleasant Boat Building Co., Inc.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Receipt of seafood and mooring fishing boats.			Mooring various types of small vessels for repair; fueling vessels.			Mooring various types of small vessels for repair.		
TYPE OF CONSTRUCTION	Timber pile, timber-decked, offshore wharf with two 40- by 20-foot timber approaches.			Timber pile, timber-decked, offshore wharf separated by 2 vertical boat lift slips; lower section, 51- by 4-foot timber approach to upper end; upper section: 60- by 4-foot concrete lower approach; 61- + 18- by 4-foot timber upper approach.			Part timber pile, timber-decked, and part concrete pile, concrete-decked offshore wharf, separated by vertical boat lift slip; lower section: lower 90- by 8-foot timber, and upper 104- by 4-foot concrete approach; upper section: 104- by 4-foot concrete approach to lower side.		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Face	Lower side	Upper side
Dimensions (Feet)	100	10	10	86 and 90	4	61+18	168+93+13	90	4
Depth Alongside at MLW Do.	8	-	-	6.5	-	0-6.5	6-8	-	-
Usable Berthing Space Do.	100	-	-	86 and 90	-	-	168+93+13	-	-
Width of Apron Do.	Open.			-			Open.		
Height of Deck Above MLW Do.	10			8			8		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHED	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	One electric, mast-and-boom derrick with 10-foot boom.			One 2-ton, mast-and-boom derrick with traveling electric hoist.			One 2-ton, mast-and-boom derrick with traveling, hand-operated hoist.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via Haddrell and Wharf Streets and Live Oak Drive, asphalt, 16-20 feet wide, from U.S. Highways 17/701.			Same as Ref. No. 52.			Same as Ref. No. 52.		
WATER SUPPLY (Available to Vessels)	Through 3/4-inch line.			Same as Ref. No. 52.			Through 1-inch line with 3/4-inch hose connections.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			A.C., 110 volts, single-phase, 60-cycle; D.C., 115 volts.			A.C., 110 volts, single-phase, 60-cycle; D.C., 115 volts.		
FIRE PROTECTION (Other than City)	Hydrant and hand extinguishers.			Portable pumps, hydrants, hose, and hand extinguishers.			Same as Ref. No. 53.		
REMARKS	Building at rear used for processing, packing and selling shrimp.			At time of survey lower vertical boat lift slip was under construction. Upon completion one diesel 150-ton, and one gasoline 20-ton mobile, vertical boat lift will serve 36- and 15-foot wide slips, respectively between lower and upper wharf sections. Two metered pumps on wharf for fueling; 1½-inch pipelines extend to pumps from one 2,000-gallon, gasoline storage tank and from one 1,000-gallon, diesel fuel storage tank.			One 100- and two 40-ton marine railways located below lower section; 2 parallel, timber finger piers flank 20-ton marine railway in center. One 30-ton, gasoline, mobile vertical boat lift serves slip between lower and upper wharf sections.		

PIERS, WHARVES, AND DOCKS

Mt. Pleasant, S.C., left bank, Shem Creek

Corps of Engineers Port Code No. 12211

REFERENCE NUMBER ON MAP	55 Dock Code No. 056	56 Dock Code No. 005	57 Dock Code No. 067
NAME	Hay Oil Co., Marine Dock.	Wholesale Seafood Wharf.	Moultrie Fisheries Wharf.
LOCATION ON WATERFRONT	Approximately 600 feet below U.S. Highway 17/701 Bridge.	Approximately 400 feet below U.S. Highway 17/701 Bridge.	Below U.S. Highway 17/701 Highway Bridge.
OWNED BY	W. C. Magwood and R. E. Magwood.	R. E. Magwood and J. M. Ruddock.	L. H. Simmons and J. M. Ruddock.
OPERATED BY	Hay Oil Co.	Wholesale Seafood, Inc.	L. H. Simmons.
PURPOSE FOR WHICH USED	Mooring, icing, and fueling small vessels.	Receipt of seafood; mooring fishing boats.	Receipt of seafood; mooring commercial and sport-fishing boats.
TYPE OF CONSTRUCTION	Timber pile, timber-decked, offshore wharf with timber approaches from shore and from service station shed at rear; fronted by timber mooring piles.	Timber pile, part concrete-, part timber-decked, offshore wharf with timber approaches from shore and through 2 shrimp-processing buildings at rear; fronted by timber mooring piles.	Timber pile, timber-decked, offshore wharf with 2 timber approaches from shore and via shrimp-processing building at lower end; fronted by timber mooring dolphins.
DESCRIPTION	Face / Lower side	Face	Face
Dimensions (Feet)	260 / 3	220	270
Depth Alongside at MLW Do.	10 / -	6	8
Usable Berthing Space Do.	260 / -	220	270
Width of Apron Do.	12	4 and open.	8 and open.
Height of Deck Above MLW Do.	7	7	7
Load Capacity per Sq.Ft. (Lbs.)	-	-	-
Lighted or Unlighted	Lighted.	Lighted.	Lighted.
TRANSIT SHEDS	None.	None.	None.
Number and Type of Construction			
Length and Width (Feet)			
Height Inside Do.			
Floor Area for Cargo (Sq.Ft.)			
Load Capacity per Sq.Ft. (Lbs.)			
Cargo Doors			
MECHANICAL HANDLING FACILITIES	Ice-blowing machine on wharf equipped with hose for supplying crushed ice to fishing boats, maximum rate 150 tons per hour.	One electric, mast-and-boom derrick for unloading shrimp.	One 1/4-ton, electric, mast-and-boom derrick for unloading seafood.
RAILWAY CONNECTIONS	None.	None.	None.
HIGHWAY CONNECTIONS	Via Magwood Lane, asphalt and unimproved, 18-10 feet wide, from Live Oak Drive.	Via Church and Mill Streets, each gravel, 20 feet wide, from U.S. Highway 17/107, asphalt, 50 feet wide.	Via Church and Mill Streets, each gravel, 20 feet wide, from U.S. Highway 17/701, asphalt, 50 feet wide.
WATER SUPPLY (Available to Vessels)	None.	Through 1-inch line.	Through 3/4-inch line.
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.	Same as Ref. No. 55.	Same as Ref. No. 55.
FIRE PROTECTION (Other than City)	Hand extinguishers.	Water line, hose, and hand extinguishers.	Water line and hose.
REMARKS	Two metered pumps on wharf for fueling; 2½-inch pipelines extend to pumps from 1 diesel fuel storage tank, total capacity 10,000 gallons.	Berthing extends 70 feet along timber pile, timber-decked wharf section across foot of Church Street and is contiguous with Ref. No. 57. Two buildings at rear, lower one on fill, upper one on piles, used for processing shrimp and as restaurant, respectively. Face of wharf is contiguous with Ref. No. 57.	Building at rear of lower end used for processing seafood. Seafood restaurants located at rear of center portion and lower end. Fish Tours Inc. and Gulf Stream Fishing each operate a sport fishing vessel berthed at lower and upper end of wharf, respectively.

Corps of Engineers Port Code No. 12211

REFERENCE NUMBER ON MAP	58 Dock Code No.929	59 Dock Code No. 938	60 Dock Code No. 061
NAME	Mt. Pleasant Seafood Co. Wharf.	Simmons Mooring Wharf.	R. E. Magwood Wharf.
LOCATION ON WATERFRONT	Below U.S. Highway 17/701 Bridge.	Approximately 600 feet below U.S. Highway 17/701 Bridge.	Approximately 1,000 feet below U.S. Highway 17/701 Bridge.
OWNED BY	W. D. Toler.	L. H. Simmons.	R. E. Magwood.
OPERATED BY	do.	do.	do.
PURPOSE FOR WHICH USED	Receipt of seafood; mooring fishing boats.	Mooring and fueling fishing boats.	Mooring fishing boats and other small vessels.
TYPE OF CONSTRUCTION	Timber pile, part timber- and part concrete-decked wharf with 2 timber approaches to lower section, upper section extends from shore; fronted by timber mooring dolphins.	Timber pile, timber-decked, offshore wharf with 50- by 4-foot approach.	Timber pile, timber-decked, offshore wharf with 475-, + 250- by 3-foot approach.

DESCRIPTION									
	Face			Face	Lower side		Face	Lower side	
Dimensions (Feet)	450			325	6		250+230	5	
Depth Alongside at MLW Dp.	6			8	-		5, and dries	-	
Usable Berthing Space Dp.	450			325	-		230	-	
Width of Apron In.	18, 4, 25, and open.			4			Open.		
Height of Deck Above MLW Dp.	8			8			10		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Lighted.			Unlighted.			Unlighted.		
TRANSIT SHED	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Dp.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									

MECHANICAL HANDLING FACILITIES	One electric, mast-and-boom derrick for unloading seafood.	None.	None.
RAILWAY CONNECTIONS	None.	None.	None.
HIGHWAY CONNECTIONS	Via road, asphalt, 20 feet wide, from U.S. Highway 17/701, asphalt, 50 feet wide.	Via road, gravel, various widths, and asphalt, 20 feet wide, from U.S. Highway 17/701, asphalt, 50 feet wide.	Same as Ref. No. 59.
WATER SUPPLY (Available to Vessels)	Through 1¼-inch line.	None.	None.
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.	A.C., 110 volts, single-phase, 60-cycle.	None.
FIRE PROTECTION (Other than City)	Water line, hose, and hand extinguishers.	None.	None.
REMARKS	Buildings at rear used for processing, packing, and selling seafood. Face of wharf is contiguous with Ref. No. 59.	Face of wharf is contiguous with Ref. No. 58. Pipeline extends to pump on dock from 2 storage tanks at rear, total capacity 18,000 gallons.	-

OIL HANDLING AND BUNKERING

Ten of the waterfront facilities described in this report are equipped to receive and/or ship petroleum products, petrochemicals, asphalt, or to load a tank barge based at the port for bunkering vessels at berth; eight are along the right bank and one is along the left bank of the Cooper River; and one is on the right bank of the Shipyard River.

Marine Contracting and Towing Co. operates four tank barges for servicing ships at berth in the harbor. These barges, together with their capacities and sizes, are listed separately in the table of Floating Equipment on page 43.

The tabulation on page 44 gives information on the facilities equipped to handle petroleum products; details are given in the table of Piers, Wharves, and Docks beginning on page 18, under the reference numbers indicated. Tank storage at marine service stations is not included.

OPEN STORAGE

In addition to the long- and short-term, covered storage facilities available for waterborne cargo, the South Carolina State Ports Authority has open paved areas available to the public for storing commodities not requiring protection from the weather. These areas total about 265 acres, the majority of which is used for container storage, but is available for general cargo as required. A tabulation of these storage facilities is provided in the Summary of General and Containerized Cargo Facilities on page 17. Other operators with waterfront facilities at the port have open storage areas to meet their own operational requirements; these areas are not usually available for public use.

GRAIN ELEVATORS

The South Carolina Farm Bureau Marketing Association operates a waterside, grain elevator at the rear of the South Carolina State Ports Authority Grain Wharf (P.W.D. Ref. No. 38). The elevator, owned by the South Carolina State Ports Authority, consists of 50, circular, concrete silos, 27 interstices (storage space between the silos),

and 8 storage bins having a total capacity of 1,600,000 bushels. The elevator is equipped to receive grain by rail and truck and to ship grain by rail, truck, and vessel. An overhead grain gallery, equipped with a 42-inch, electric, belt conveyor and 5 vessel-loading spouts, extends the full length of the wharf and connects with the elevator at rear; the combined loading rate of the spouts to oceangoing vessels is 15,000 bushels per hour. The wharf provides 380 feet of berthing space with a 35-foot depth of water alongside at mean low water.

Grain is received by rail at a car shed and by truck at two hydraulically operated truck dumpers. The car shed is served by a surface track, where hopper cars are bottom-dumped into a receiving pit under the track at a rate of four cars per hour. Grain received by highway trucks is unloaded at the 2 dumpers into receiving pits at a combined rate of approximately 12 trucks per hour. Four loading spouts are available for loading grain into rail cars at the elevator, and four for loading trucks; primarily, the elevator is used for the receipt of grain by rail and truck and shipment by vessel. Tracks of the South Carolina Public Railways Commission serve the elevator.

WAREHOUSES

In the port area, 8 companies and the South Carolina State Ports Authority operate warehouses having a total of 1,817,000 square feet of dry storage space and 767,800 cubic feet of cold storage space. Of this total, 1,078,500 square feet of dry storage space and 600,000 cubic feet of cold storage space are provided by the South Carolina State Ports Authority.

All except 3 of the warehouses have railroad connections, and each is accessible to arterial highways. Diversified handling equipment is maintained by the operators, and special services are provided, including packing and crating, forwarding, pool car distribution, carloading, weighing, stamping, marking, and blast freezing.

The summary on page 45 lists the operators and gives the storage capacity of the dry and cold storage facilities which are more fully described under individual reference numbers

in the table of Storage Warehouses beginning on page 46. The reference numbers identify warehouse locations on the Port Facilities Maps.

In addition, the Carolina Trade Zone operates the 20-acre area on U.S. Highway 78 west of Summerville, South Carolina, designated as Foreign Trade Zone No. 21. It is approximately 22 miles from Charleston and consists of a concrete, sprinklered, 192,000 square foot warehouse with 17 truck loading stations and truck access to interior; and 4 steel storage tanks for bulk liquids, total capacity 10,000 gallons. If required, a spur of the Southern Railway System can be extended into the Trade Zone.

HOISTING EQUIPMENT - ASHORE AND AFLOAT

General cargo is usually handled to and from vessels by ships' tackle. However, shore-based hoisting facilities are available to the public for making lifts up to 400 tons. In addition, there are several container-handling cranes at various terminals. These facilities are owned and operated by the South Carolina State Port Authority. Details of these facilities are given in the table of Hoisting Equipment - Ashore on page 49.

The U.S. Army Depot at Charleston has a floating crane with a lift capacity of 100 tons, which is available to the public for making heavy lifts at shipside; however, special arrangements must be made for use of this crane. Cranes, derricks, and special-handling equipment at other waterfront facilities within the port area are usually for the sole use of the operating companies and are described under "Mechanical Handling Facilities" in the preceding table of Piers, Wharves, and Docks.

MARINE REPAIR PLANTS

Six plants operate waterfront facilities at the port for the repair and conversion of oceangoing vessels, barges, tugs, towboats, fishing vessels and other types of small vessels. These plants have fully equipped shops and portable equipment for making above-waterline repairs on all types of vessels at any location in the port. Details of these plants are found in the table of Marine Repair Plants on page 50.

All of the plants operate haul-out or drydocking facilites which are described in the following section, "Drydocks, Marine Railways, and Vertical Boat Lifts."

The Port of Charleston also has several plants without waterfront facilities which are engaged in various types of marine repair work. These companies maintain shops and portable equipment for making above-waterline repairs, and for installing equipment, gear, and machinery on all types of craft at berth.

DRYDOCKING FACILITIES

Three floating drydocks, four marine railways, and five vertical boat lifts are at the waterfront marine repair plants. The floating drydocks have lifting capacities of 9,800, 6,400 and 1,000 tons; the haul-out capacities of the marine railways range from 20 to 1,000 tons, and the lift-out capacities of the vertical boat lifts range from 20 to 400 tons.

Detailed descriptions of the floating drydocks, marine railways,and vertical boatlifts are given in the tables on pages 51 and 52.

FLOATING EQUIPMENT

Marine Contracting & Towing Co. (P.W.D. Ref. No. 19) and White Stack Towing and Transportation Co. (P.W.D. Ref. No. 12) own and operate 10 tugboats with ratings up to 3,600 horsepower, which are available for performing towing, docking, and undocking services for vessels at the Port of Charleston. Towing services of these companies extend beyond the limits of the port to points along the Atlantic Intracoastal Waterway and Atlantic Coast. Marine Contracting & Towing Co. also operates four tank barges with cargo-carrying capacities up to 20,000 barrels for making deliveries of bunker and light oil fuel to vessels at berth.

The table on page 43 describes in detail the commercial tugboats and tank barges serving the Port of Charleston.

Additional information on floating equipment can be obtained from Transportation Series No. 5, titled "Transportation Lines on the Atlantic, Gulf, and Pacific Coasts." This report, published annually by the Corps of Engineers, Department of the Army, describes the American flag vessels engaged in the carriage of freight and passengers, listing the net registered tonnage, length, width, draft, horsepower, carrying capacity, and other details of construction; and describes the operations of each vessel operator, listing the waterways used and the localities served. Copies of this publication are for sale by the District Engineer, U.S. Army Engineer District, New Orleans, P. O. Box 60267, New Orleans, LA 70160.

RAIL LINES

The Port of Charleston is served by two line-haul, rail carriers and by three terminal and switching lines: Seaboard Coast Line Railroad; Southern Railway (Southern Railway System); North Charleston Terminal Company; Port Terminal Railroad of South Carolina; and the Port Utilities Commission of Charleston, SC.

The North Charleston Terminal Company provides switching service between waterfront facilities and the connecting railroads at North Charleston. It is controlled jointly between the Seaboard Coast Line Railroad and the Southern Railway System.

The South Carolina Public Railways Commission terminal switching lines serve the South Carolina State Ports Authority's waterfront facilities and connect with the two line-haul rail carriers serving Charleston.

FLOATING EQUIPMENT

(a) OPERATOR AND ADDRESS (b) BASE FROM WHICH OPERATED	NAME	DIMENSIONS OVERALL		DRAFT UNDER LOAD	HOW OPERATED	HORSE POWER	CARGO CAPACITY (BARRELS)
		LENGTH (FEET)	WIDTH (FEET)				
	TUGS AND TOWBOATS						
(a) Marine Contracting and Towing Co. P.O. Box 153 Charleston, SC 29402 (b) P.W.D. Ref. No. 19	Admiral Dewey	103	21	13	Diesel	700	-
	Charleston	95	21.6	12	do.	1,800	-
	Hinton	83	24.3	8.5	do.	1,800	-
	Lewis G. Seabrook	110	26.2	11.1	do.	3,600	-
	Samuel A. Guilds	90	21	11.2	do.	1,800	-
(a) White Stack Towing and Transportation Co. Foot of Laurens Street Charleston, SC 29402 (b) P.W.D. Ref. No. 12	Christopher	106	27.4	12.2	do.	1,800	-
	Kimberly	81.1	24	12	do.	1,600	-
	George McD. Lockwood	88.2	19	12	do.	1,250	-
	M. B. Coppedge	83.2	19	11	do.	1,250	-
	Peter G. Turecamo	105	30	15.1	do.	3,200	-
	TANK BARGES*						
(a) Marine Contracting and Towing Co. P.O. Box 153 Charleston, SC 29402 (b) P.W.D. Ref. No. 19	Martoco 10	178	38	12	Towed	-	12,000
	Martoco 11	110	32	7.6	do.	-	3,200
	Martoco 12	290.2	50.1	10.8	do.	-	20,000
	Martoco 13	290.2	50.1	10.8	do.	-	20,000

*Diesel pumps.

OIL HANDLING AND BUNKERING

P.W.D. REF. NO.	OPERATOR AND/OR USER	STORAGE TANKS NUMBER	STORAGE TANKS CAPACITY (BARRELS)
	Right bank - Cooper River		
21(1&6)	Exxon Company, U.S.A.....	169	2,985,200
27(2)	Amerada Hess Corp.....	19	462,000
28	American Petrofina Co. of Texas.	9	296,000
30	Shell Oil Co.....	5	282,800
31	Texaco, Inc.....	25	319,000
32	Marathon Oil Co.....	9	485,500
33(3)	Amerada Hess Corp.....	9	770,000
41(4)	South Carolina Electric and Gas Co.....	4	1,300,000
	Left bank,- Cooper River		
44	Amoco Chemicals Corp.....	2 2	200,000(4) 300,000(5)
	Right bank,- Shipyard River		
23(1)	Gulf Oil Co.-U.S., Division of Gulf Oil Corp.....	46	705,000
	TOTAL.....	299	7,400,500

(1) Bunkering vessels.
(2) Not operated at time of survey - tanks connected to Ref. No. 33 wharf.
(3) Bunkering tank vessels berthed at wharf.
(4) Receipt of fuel oil for plant consumption.
(5) Petrochemicals.
(6) Loading barges for bunkering vessels at berth.

DRY AND COLD STORAGE WAREHOUSES

S.W. REF. NO.		STORAGE AREA	
		DRY (SQ.FT.)	COLD (CU.FT.)
10	Burns Chemical, Inc.....	162,000	-
17	Charleston Warehouse Associates	210,000	-
		9,600(B)	-
15	Commercial Bonded Warehouse....	157,000	-
		17,000(B)	-
9	Davis Warehouse Co., Inc.....	64,000	-
1		4,000(B)	-
1	Halter, H. W., and Sons.....	-	6,500(C)
		-	7,400(F)
5	Leonard Storage Co., Inc.....	20,000	-
8	do.....	8,000	-
2	South Carolina State Ports Authority.....	20,600	-
3	do.....	37,700	-
4	do.....	92,300	-
7	do.....	67,600	-
12	do.....	656,000	600,000(F)
13	do.....	20,000	-
14	do.....	32,500	-
16	do.....	101,400(B)	-
18	do.....	50,400	-
6	Taylor Frozen Foods.....	-	8,700(C)
		-	65,200(F)
11	United Public Warehouse Co., Inc.....	87,000	36,000(C)
		-	44,000(F)
	TOTAL.....	1,817,100	767,800

(B) Bonded.
(C) Cooler.
(F) Freezer.

STORAGE WAREHOUSES

(For public merchandise only)

WAREHOUSE REF. NO. ON MAP	1		2		3	
OPERATOR AND ADDRESS	H. W. Halter and Sons P.O. Box 12810 Charleston, SC 29412		South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402	
BUILDING DESIGNATION/S	-		Building 302		Building 301	
LOCATION	Folly Road.		Rear of transit shed on State Pier 2, lower wharf (P.W.D. Ref. No. 10).		Rear of transit shed on State Pier 2, lower wharf (P.W.D. Ref. No. 10).	
KIND OF STORAGE	Cold.		Dry.		Dry.	
COMMODITIES USUALLY STORED	Perishable food commodities.		General merchandise.		General merchandise.	
DESCRIPTION Type of Construction	Concrete frame, walls and floor.		Low concrete walls, topped by steel frame, metal-covered; wood floor supported by concrete-jacketed timber piles.		Low concrete walls topped by steel frame, metal-covered; concrete floor supported by concrete piles.	
Number of Floors	One.		One.		One.	
Clear Height for Storage (Feet):						
First Floor	24		20		20	
Other Floors	-		-		-	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	1,000		250		400	
Other Floors	-		-		-	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage.....(Sq.Ft.)			20,600		37,700	
U.S. Customs Bonded.(Sq.Ft.)			-			
Cooler Space.....(Cu.Ft.)		6,500				
Freezer Space.....(Cu.Ft.)		7,400				
Convertible Space...(Cu.Ft.)						
RAILWAY CONNECTIONS	None.		South Carolina Public Railways Commission: Two platform-level tracks along north side of warehouse, total capacity 5 cars; tracks also serve south side of Bldg. 304 (S.W. Ref. No. 3) and continue to interior of transit shed.		South Carolina Public Railways Commission: Use of tracks described under Warehouse Building 302 (S.W. Ref. No. 2).	
TRUCKLOADING STATIONS	Three.		Four.		Four.	
HANDLING EQUIPMENT	Three 2-ton electric fork lift trucks.		Use of mobile equipment described under State Pier 2, lower wharf (P.W.D. Ref. No. 10).		Use of mobile equipment described under State Pier 2, lower wharf (P.W.D. Ref. No. 10).	
FIRE PROTECTION	Dry chemical system.		One 100,000-gallon water tower, sprinkler system, hydrants, hose, and 1,000-gallon-per minute pump.		Same as S.W. Ref. No. 2.	
REMARKS	Freon refrigeration system, temperature range in freezer 0° to -10° F; cooler 30° to 40°F.		-		Trucks have access to interior of warehouse.	

WAREHOUSE REF. NO. ON MAP	4		5		6	
OPERATOR AND ADDRESS	South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		Leonard Storage Co., Inc. Foot of Society Street Charleston, SC 29401		Taylor Frozen Foods 24 Woolfe Street Charleston, SC 29402	
BUILDING DESIGNATION/S	Building 324		Warehouse No. 1		-	
LOCATION	West side of Concord Street, between Fritchard and Hasell Streets.		North side of Society Street, east of Bay Street.		Same as above.	
KIND OF STORAGE	Dry.		Dry.		Cold.	
COMMODITIES USUALLY STORED	General merchandise.		General merchandise.		Perishable food commodities.	
DESCRIPTION Type of Construction	Low concrete walls topped by steel frame, metal-covered; concrete floor.		Timber frame, brick and masonry side; concrete floor.		Timber frame: 1st and 2d floors brick walls; 3d floor, wooden siding; concrete floor on 1st floor, wooden floor on 2d & 3d floors.	
Number of Floors	One.		One.		Three.	
Clear Height for Storage (Feet):						
First Floor	20		30		7	
Other Floors	-		-		7, 2d; 8, 3d	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	1,000		1,000		450	
Other Floors	-		-		250	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage.....(Sq.Ft.)	92,300		20,000			
U.S. Customs Bonded.(Sq.Ft.)						
Cooler Space.....(Cu.Ft.)					-	8,700
Freezer Space.....(Cu.Ft.)						65,200
Convertible Space...(Cu.Ft.)						
RAILWAY CONNECTIONS	South Carolina Public Railways Commission: One platform-level track along east side of warehouse, total capacity 5 cars.		Seaboard Coast Line Railroad: One 120-foot surface track along east side of warehouse; part platform-level, part car floor-level; total capacity 5 cars.		Southern Railway System: One 90-foot platform-level track along west side of warehouse, capacity 3 cars.	
TRUCKLOADING STATIONS	Three		Ten		Four	
HANDLING EQUIPMENT	Use of mobile equipment described under State Pier No. 2, Lower Wharf (P.W.D. Ref. No. 10).		Fork lift trucks available as required.		One 2-ton electric elevator; fork lift trucks available as required.	
FIRE PROTECTION	Automatic fire detection system, sprinkler system and hand extinguishers.		Same as S.W. Ref. No. 4.		Same as S.W. Ref. No. 4.	
REMARKS	-		-		Ammonia expansion refrigeration system with temperature range of 35°F to 40°F in cooler section, and 0°F to -10°F in freezer section. Third floor divided into small freezer rooms.	

STORAGE WAREHOUSES

(For public merchandise only)

WAREHOUSE REF. NO. ON MAP	7		8		9	
OPERATOR AND ADDRESS	South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		Leonard Storage Co., Inc. Foot of Society Street Charleston, SC 29401		Davis Warehouse Company, Inc. 1553 King Street Extension Charleston, SC 29405	
BUILDING DESIGNATION/S	Building No. 119		Warehouse No. 2		Buildings Nos. 1 and 2	
LOCATION	Rear of North Transit Shed on State Pier 8 (P.W.D. Ref. No. 17).		Northeast corner of King and Mt. Pleasant Streets.		Same as above.	
KIND OF STORAGE	Dry.		Dry.		Dry.	
COMMODITIES USUALLY STORED	General merchandise.		General merchandise.		General merchandise.	
DESCRIPTION Type of Construction	Low concrete walls topped by steel frame, metal-covered; concrete floor.		Timber frame, metal-covered; part wooden and part concrete floor.		Two buildings: No. 1: concrete block walls, concrete floor; No. 2: steel frame, metal-covered, concrete floor.	
Number of Floors	One		One		One,each.	
Clear Height for Storage (Feet):						
First Floor	20		14		18, Bldg. No. 1; 20, Bldg. No. 2.	
Other Floors	-		-		-	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	600		-		480, Bldg. No. 1; 400, Bldg. No. 2.	
Other Floors	-		-		-	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage.....(Sq.Ft.)	67,600		8,000		64,000	
U.S. Customs Bonded.(Sq.Ft.)					4,000	
Cooler Space.....(Cu.Ft.)						
Freezer Space.....(Cu.Ft.)						
Convertible Space,..(Cu.Ft.)						
RAILWAY CONNECTIONS	None.		Southern Railway System: One surface track at car floor-level along east side of warehouse, total capacity 4 cars.		One platform-level track along south side of Building No. 1, total capacity 3 cars; connects with Southern Railway System and Seaboard Coast Line Railroad.	
TRUCKLOADING STATIONS	Four, south end; eight, north end.		Ten.		Twelve.	
HANDLING EQUIPMENT	Use of mobile equipment described under State Pier 8, Berth 2 (P.W.D. Ref. No. 16).		Fork lift trucks available as required.		Five gasoline fork lift trucks.	
FIRE PROTECTION	Automatic fire detection system, sprinkler system, hydrants, hose and watchmen.		Same as S.W. Ref. No. 7.		Sprinkler system, hydrants, hose and hand extinguishers.	
REMARKS	-		-		Buildings and open storage areas fenced in.	

WAREHOUSE REF. NO. ON MAP	10		11		12	
OPERATOR AND ADDRESS	Burris Chemical, Inc. 960 Morrison Drive P.O. Box 70788 Charleston, SC 29405		United Public Warehouse Co., Inc. 4567 Rivers Avenue North Charleston, SC		South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402	
BUILDING DESIGNATION/S	Buildings Nos. 1, 2, and 3.		-		Warehouses C, D, E, and F.	
LOCATION	Rear of Shipyard River Terminal Wharf (P.W.D. Ref. No. 22) (See Remarks).		Same as above.		Rear of transit shed on State Pier 15, North Charleston Terminal (PWD Ref. 36).	
KIND OF STORAGE	Dry.		Dry and cold.		Dry and cold.	
COMMODITIES USUALLY STORED	Bulk and bagged commodities.		General merchandise and perishable food commodities.		General merchandise and perishable food commodities.	
DESCRIPTION Type of Construction	Three buildings: steel frame, asbestos cement siding; concrete floors.		Part concrete block and brick and part steel frame, metal-covered; concrete floor.		Four buildings: tile walls in Warehouses C, D, E and part of F; remaining portion of F, concrete walls; all with concrete floors.	
Number of Floors	One, each.		One.		One, each.	
Clear Height for Storage (Feet):						
First Floor	35, each		20-28		18-20	
Other Floors	-		-		-	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	1,000, each		Unlimited		500, each	
Other Floors	-		-		-	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage.....(Sq.Ft.)	162,000		87,000		656,000	
U.S. Customs Bonded.(Sq.Ft.)						
Cooler Space.....(Cu.Ft.)				36,000		
Freezer Space.....(Cu.Ft.)				44,000		600,000
Convertible Space,..(Cu.Ft.)						
RAILWAY CONNECTIONS	Two surface tracks, part at platform-level, serve warehouse, total capacity 50 cars; connect with Southern Railway System and Seaboard Coast Line Railroad.		One platform level track serves warehouse, total capacity 8 cars; connects with Southern Railway System and Seaboard Coast Line Railroad.		South Carolina Public Railways Commission: Three platform-level tracks between Warehouses C and D, and 3 platform-level tracks between Warehouses E and F, total length 6,400 feet; total capacity 112 cars.	
TRUCKLOADING STATIONS	Fourteen.		Seventeen.		-	
HANDLING EQUIPMENT	Seven 1- to 3-cubic yard, diesel front end loaders.		Two 1½-ton gasoline fork lift trucks.		Use of mobile equipment described under State Pier 15, North Charleston Terminal (P.W.D. Ref. No. 36).	
FIRE PROTECTION	Automatic fire detection system, one 50,000 gallon water tower, pumps, hydrants, hose, hand extinguishers, and watchmen.		Automatic fire detection system, sprinkler system, and hand extinguishers.		Automatic fire detection system, sprinkler system, one 200,000-gallon water tower, hand extinguishers and watchmen.	
REMARKS	Shipyard River Terminal is a Division of Burris Chemical, Inc.		Direct ammonia expansion refrigeration system with temperature range to -10°F.		Cold storage plant in concrete portion of Warehouse F, equipped with direct ammonia expansion system with temperature range to -10°F.	

STORAGE WAREHOUSES

(For public merchandise only)

WAREHOUSE REF. NO. ON MAP	13		14		15	
OPERATOR AND ADDRESS	South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		Commercial Bonded Warehouse Box 5322 North Charleston, SC 29406	
BUILDING DESIGNATION/S	Building 524		Building 506		-	
LOCATION	Rear of State Pier 16, North Charleston Terminal (P.W.D. Ref. No. 37).		Rear of State Pier 15 North Charleston Terminal (P.W.D. Ref. No. 36).		1004 Trident Street; Hanahan; S.C. 29406	
KIND OF STORAGE	Dry.		Dry.		Dry.	
COMMODITIES USUALLY STORED	Lumber.		General merchandise. (See Remarks.)		General merchandise.	
DESCRIPTION Type of Construction	Steel frame, metal-covered, concrete floor.		Low concrete walls topped by steel frame, metal-covered; concrete floor.		Steel frame, metal-siding, concrete floors.	
Number of Floors	One.		One.		One.	
Clear Height for Storage (Feet):						
First Floor	20		20		20-22	
Other Floors	"		"		"	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	500		500		"	
Other Floors	"		"		"	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage (Sq.Ft.)	20,000		32,500		157,000	
U.S. Customs Bonded (Sq.Ft.)					17,000	
Cooler Space (Cu.Ft.)						
Freezer Space (Cu.Ft.)						
Convertible Space (Cu.Ft.)						
RAILWAY CONNECTIONS	South Carolina Public Railways Commission: One surface track at car floor-level, capacity one car.		South Carolina Public Railways Commission: Two platform-level tracks along north side of warehouse, total capacity 22 cars.		Platform-level track, capacity 5 cars, connects with Seaboard Coast Line Railroad.	
TRUCKLOADING STATIONS	-		Twelve.		Forty.	
HANDLING EQUIPMENT	Use of mobile equipment described under State Pier 15, North Charleston Terminal (P.W.D. Ref. No. 36).		Same as S.W. Ref. No. 13.		Seven LP-gas fork lift trucks.	
FIRE PROTECTION	Automatic fire detection system, hydrants, hose, hand extinguishers, and watchmen.		Same as S.W. Ref. No. 13.		Automatic fire detection system, sprinkler system and hand extinguishers.	
REMARKS	-		West ½ of warehouse used as Container Freight Station.		-	

WAREHOUSE REF. NO. ON MAP	16		17		18	
OPERATOR AND ADDRESS	South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402		Charleston Warehouse Associates P.O. Box 10006 Charleston, SC 29411		South Carolina State Ports Authority P.O. Box 817 Charleston, SC 29402	
BUILDING DESIGNATION/S	-		-		-	
LOCATION	5801 Rhett Avenue Hanahan, S.C. 29406		904 Commerce Circle Hanahan, S.C. 29406		925 Commerce Circle, Trident Industrial Park, Hanahan, S.C. 29406	
KIND OF STORAGE	Dry.		Dry.		Dry.	
COMMODITIES USUALLY STORED	General merchandise.		General merchandise.		General merchandise.	
DESCRIPTION Type of Construction	Concrete frame, walls and floor.		Concrete frame, walls and floor.		Concrete frame, walls and floor.	
Number of Floors	One.		One.		One.	
Clear Height for Storage (Feet):						
First Floor	20		20		12	
Other Floors	"		"		"	
Load Capacity (Lbs/Sq.Ft.):						
First Floor	1,200		"		1,000	
Other Floors	"		"		"	
AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage (Sq.Ft.)			210,000		30,400	
U.S. Customs Bonded (Sq.Ft.)	101,400		9,600			
Cooler Space (Cu.Ft.)						
Freezer Space (Cu.Ft.)						
Convertible Space (Cu.Ft.)						
RAILWAY CONNECTIONS	Platform-level track, capacity 6 cars, connects with Seaboard Coast Line Railroad.		Platform-level track, capacity 10 rail cars; connects with Seaboard Coast Line Railroad.		None.	
TRUCKLOADING STATIONS	Ten.		Twelve.		Four.	
HANDLING EQUIPMENT	Fork lift trucks available as required.		Fifteen 2- to 4-ton, electric or LP-gas, fork lift trucks.		Fork lift trucks available as required.	
FIRE PROTECTION	Automatic fire detection system, sprinkler system, hand extinguishers and watchmen.		Same as S. W. Ref. No. 16.		Same as S. W. Ref. No. 16.	
REMARKS	-		-		-	

HOISTING EQUIPMENT - ASHORE

LOCATED ON P.W.D. REF. NO.	OWNER AND/OR OPERATOR	LENGTH OF BERTH SERVED (FT.)(1)	NUMBER AND TYPE	BOOM AND/OR CAPACITY
	SOUTH CAROLINA STATE PORTS AUTHORITY			
10, 11	State Pier 2, Union Pier Berths 1, 2, and 3	2,471	Two 140-ton diesel, mobile cranes.(2)	50-foot boom, 140-ton at 12-foot radius; 150-foot boom, 5.2-ton at 150-foot radius.
		do.	One 90-ton diesel, mobile crane.(2)	50-foot boom, 90-ton at 12-foot radius; 100-foot boom, 5.8-ton at 100-foot radius.
		do.	One 60-ton diesel, mobile crane.(2)	36-foot boom, 60-ton at 10-foot radius; 114-foot boom, 0.8-ton at 109-foot radius.
		do.	One 40-ton diesel, mobile crane.(2)	32-foot boom, 40-ton at 10-foot radius; 100-foot boom, 1.4-ton at 90-foot radius.
11	State Pier 2, Union Pier Berths 2 and 3	1,421	One 103-ton, diesel-electric, traveling, revolving, full-portal gantry crane.	103 tons at 55-foot radius having 31-foot outboard reach.
15	State Pier 8, Columbus Street Terminal Container Wharf, Berth 1	900	Two 40-long ton, diesel-electric, traveling, container-handling cranes.	Each with 128-foot, hinged-cantilevered boom with 104-foot outboard reach, one 51- and one 61-foot back reach, and one 214.5- and one 224.5-foot container travel length.
15, 16	State Pier 8, Columbus Street Terminal; Berths 1, 2, and 3	2,006	One 75-ton, diesel-electric, traveling, revolving, level-luffing, gantry crane.	75-tons at 21-foot outboard reach, 27.5-tons at 81-foot outboard reach.
			One 50-ton, diesel-electric, traveling, revolving, level-luffing, gantry crane.	50-tons at 31-foot outboard reach; 30-tons at 66-foot outboard reach.
			One 30-ton, diesel-electric, traveling, revolving, level-luffing, gantry crane.	30-tons at 34-foot outboard reach; 15-tons at 64-foot outboard reach.
17	State Pier 8, Berth 4	Fixed	One 400-ton, electric, shear-leg derrick.	150-foot boom; 400-, 250-, and 133-ton at 46-, 65-, and 85-foot outboard reach, respectively.
36, 37	State Piers 15 and 16, North Charleston Terminal, Berth 1, and Berth 2 and 3, respectively	2,460	One 30-ton, diesel-electric, traveling, revolving, level-luffing, gantry crane.	30 tons at 34-foot outboard reach; 15 tons at 64-foot outboard reach.
37	State Pier 16, North Charleston Terminal, Berths 2 and 3	1,860	Three 40-long ton, diesel-electric, traveling, container-handling cranes.	Each with 128-foot, hinged-cantilevered boom with 103-foot outboard reach; two lower and upper cranes have 61- and 51-foot back reach, and 224.5- and 214.5-foot container travel length, respectively.
46(3)	State Pier 41, Wando River Terminal, Berths 1, 2, and 3	2,675	Four 40-long ton, diesel-electric, traveling container-handling cranes.	Each with 128-foot hinged-cantilevered boom with 103-foot outboard reach; 61-foot back reach, and 226-foot container travel length.

(1) All berth depths alongside at 35 feet MLW.
(2) These cranes available for use at all South Carolina State Ports Authority Terminals.
(3) Terminal under construction at time of survey.

MARINE REPAIR PLANTS

REF. NO. OF NEAREST PIER OR WHARF	1	5
OPERATOR AND ADDRESS	Sandblasters, Inc., d.b.a. Swygert Shipyard and Dry Dock P.O. Box 308 Johns Island, SC 29455	Braswell Shipyards, Inc. 2026 Meeting Street Charleston, SC 29405
LOCATION OF PLANT	Johns Island, right bank of Stono River, 3.8 miles above west end of Elliot Cut.	Left bank of Ashley River, approximately 1.9 miles below State Highway 7 Bridge.
REPAIR SHOPS AND EQUIPMENT	Shops: Machine, electrical, steel and aluminum fabrication, and engine; woodworking equipment; portable power and hand tools; welding units; sandblasting equipment; one 35-ton crawler and one 10-ton mobile crane; and one 1,000-ton marine railway.	Shops: Machine, carpenter, electrical, fabrication, pump and turbine, valve, paint; welding units; sandblasting equipment; air compressors.
NATURE OF WORK UNDERTAKEN	Above- and below-waterline repairs to barges and various types of small vessels up to capacity of marine railway; repairs to marine engines, machinery, electrical systems, and electronic equipment; and welding work including aluminum and bronze.	Above-waterline repairs of any nature to all types of wood, steel or aluminum hulled vessels; repairs to marine engines, machinery, pumps, turbines and deck equipment; sub-contract gas-freeing and electronic repair.
LARGEST SHAFTS PRODUCED	None.	By subcontract.
LARGEST CASTINGS PRODUCED	None.	None.
VESSEL CAPACITY AT PLANT	One on marine railway; 440 feet of berthing space at pier.	Pier has 300 feet of berthing space.
REMARKS	Repair work performed at plant and on board vessels at any location in harbor.	Additional repair facilities at Salmons Dredging Corp. Wharf in Shipyard River (P.W.D. Ref. No. 24) as required. Repair work performed at plant and on board vessels at any location in harbor and in the United States or overseas.

REF. NO. OF NEAREST PIER OR WHARF	14	20
OPERATOR AND ADDRESS	Town Creek Boat Yard, Inc. Foot of Charlotte Street Charleston, SC 29403	Seahol Contracting Co. 50 Immigration Street Charleston, SC 29402
LOCATION OF PLANT	Right bank of Cooper River (Town Creek) at foot of Charlotte Street.	Right bank of Cooper River, above Silas N. Pearman - Grace Memorial Highway Bridges.
REPAIR SHOPS AND EQUIPMENT	Shops: Machine, carpenter, fiberglass, painting; sandblasting equipment; and one 30-ton mobile, vertical boat lift; and diver-operated under water hull-cleaning machine.	Shops: Machine, carpenter, electrical, and engine; portable welding units; sandblasting and gas-freeing equipment; one 25-, and three 5-ton mobile cranes; shipbuilding and launching ways; one 400-ton vertical boat lift.
NATURE OF WORK UNDERTAKEN	Above- and below-waterline repairs to various types of small vessels up to capacity of vertical travel lift; repairs to marine engines, machinery and deck equipment.	Construction and above- and below-waterline repairs to steel barges and various types of small vessels; up to capacity of vertical boat lift repairs to marine engines, machinery, and equipment; sandblasting and painting; gas-freeing and cleaning tank barges.
LARGEST SHAFTS PRODUCED	By subcontract.	Lathe: 34-inch swing by 7-foot bed.
LARGEST CASTINGS PRODUCED	None.	None.
VESSEL CAPACITY AT PLANT	One on vertical boat lift; 70- + 200-feet of berthing space at pier.	One on vertical boat lift; 540 feet of berthing space at pier; additional 1,700 feet w/dolphins on upper side along shore.
REMARKS	Open boat storage and work area in rear for approximately 12 small boats.	Repair work performed at plant and on board vessels at any location in harbor.

REF. NO. OF NEAREST PIER OR WHARF	47-49	53 and 54
OPERATOR AND ADDRESS	Detyens Shipyards, Inc. P.O. Box 180 Mt. Pleasant, SC 29464	Mt. Pleasant Boat Building Co., Inc. P.O. Box 188 Mt. Pleasant, SC 29464
LOCATION OF PLANT	Wando, left bank of Wando River, approximately 500 to 750 feet below State Highway 41 Bridge.	Mt. Pleasant, left bank of Shem Creek, approximately 900 feet above mouth.
REPAIR SHOPS AND EQUIPMENT	Shops: Machine, carpenter, electrical, steel fabrication, pipe, welding units; sandblasting equipment; air compressors; one 9,800-, one 6,,00- and one 1,000-ton floating drydock; two 25-ton mobile cranes; and one 15-ton floating crane with 70-foot boom.	Shops: Machine, fabricating, carpenter, electrical, fiber glass and paint; portable power and hand tools; acetylene and electric welding units, sandblasting equipment; one 100-, and two 40-ton marine railways; one 130-, one 30- and one 20-ton vertical boat lift. (See Remarks.)
NATURE OF WORK UNDERTAKEN	Conversion and above- and below-waterline repairs of any nature to all types of vessels up to capacity of floating drydocks; repairs to marine engines, boilers, machinery, and deck equipment; gas-freeing and tank cleaning; and sandblasting and painting.	Above- and below-waterline repairs to various types of small wooden, steel, aluminum and fiber glass hull vessels up to capacity of marine railways and vertical boat lifts; repairs to gasoline and diesel marine engines; electrical work; scraping, sandblasting, and painting.
LARGEST SHAFTS PRODUCED	30 feet by 48 inches.	Lathe: 18-inch swing by 12-foot bed.
LARGEST CASTINGS PRODUCED	None.	None.
VESSEL CAPACITY AT PLANT	One in each floating drydock; 1,780 feet of berthing space.	One on each marine railway; 563 feet of berthing space at pier.
REMARKS	Repair work performed at plant and on board vessels at any location in harbor and Georgetown, SC.	Open boat storage and work area in rear for approximately 80 small boats and additional 5 acre open storage for larger boats.

P.W.D. REF. NO.	49	49
OWNED BY	Detyens Shipyards, Inc.	Detyens Shipyards, Inc.
OPERATED BY	Detyens Shipyards, Inc.	Detyens Shipyards, Inc.
ADDRESS	P.O. Box 180 Mt. Pleasant, SC 29464	P.O. Box 180 Mt. Pleasant, SC 29464
LOCATION ON WATERFRONT	Wando, left bank of Wando River, approximately 500 to 750 feet below State Highway 41 Bridge.	
TYPE OF CONSTRUCTION	Wood, 4 sections.	Wood.
DIMENSIONS (FEET): Length overall..... Length on blocks..... Width overall..... Clear width for vessel..... Maximum depth over blocks..	No. 3 407, includes one 35-foot apron. 372 116 86 24	No. 4 231 161 82 61 17
LIFTING CAPACITY (LONG TONS)	6,400	1,000
MEAN RANGE OF TIDE (FEET)	6.0	6.0
CRANE SERVICE	Two 25-ton, diesel, mobile cranes, each with 90-foot boom; and one 15-ton floating crane with 90-foot boom.	
UTILITIES AVAILABLE	Compressed air, steam, water, A.C., 110/220/440 volts, and D.C., 110 volts.	
LARGEST VESSEL HANDLED (FEET)	-	220 by 55
DATE BUILT/REBUILT	1943	-
REMARKS	Drydock moored end-to face of Pier B. Pool depth 30 feet at MLW.	Drydock moored end-to face of Pier A. Pool depth 42 feet at MLW.

P.W.D. REF. NO.	47	
OWNED BY	Detyens Shipyards, Inc.	
OPERATED BY	Detyens Shipyards, Inc.	
ADDRESS	P.O. Box 180 Mt. Pleasant, SC 29464	
LOCATION ON WATERFRONT	Wando, left bank of Wando River, approximately 500 to 750 feet below State Highway 41 Bridge.	
TYPE OF CONSTRUCTION	Wood, 5 sections.	
DIMENSIONS (FEET) Length overall..... Length on blocks..... Width overall..... Clear width for vessel..... Maximum depth over blocks..	No. 1 450 includes one 40-foot apron. 410 114 86 24	
LIFTING CAPACITY (LONG TONS)	9,800	
MEAN RANGE OF TIDE (FEET)	6.0	
CRANE SERVICE	One diesel-electric 25-, and one electric 15-ton revolving gantry cranes having 100-foot radius; two 25-ton diesel mobile cranes, each with 90-foot boom; and one 15-ton floating crane with 90-foot boom.	
UTILITIES AVAILABLE	Compressed air, steam, water, A.C., 110/220/440 volts, and D.C., 110 volts.	
LARGEST VESSEL HANDLED (FEET)	600 by 86	
DATE BUILT/REBUILT	1944	
REMARKS	Drydock moored lower side in rear of face of wharf, Pier E. Pool depth 42 feet at MLW.	

MARINE RAILWAYS

REF. NO. OF NEAREST PIER OR WHARF	1	53 and 54	
OWNED BY	Sandblasters, Inc. d.b.a. Swygert Shipyard and Dry Dock.	Mt. Pleasant Boat Building Co., Inc.	
OPERATED BY	do.	do.	
ADDRESS	P.O. Box 308 Johns Island, SC 29455	P.O. Box 188 Mt. Pleasant, SC 29464	
LOCATION ON WATERFRONT	Johns Island, right bank of Stono River, 3.8 miles above west end of Elliot Cut.	Mt. Pleasant, left bank of Shem Creek, approximately 900 feet above mouth.	
TYPE	Crandall.	Crandall.	
DIMENSIONS (FEET):		No. 1 / No. 2 / No. 3	
Length of cradle	160	50 / 50 / 85	
Length on blocks	160	50 / 50 / 72	
Clear width of cradle at top of keel blocks	40	15 / 15 / 22	
Depth over keel blocks at MHW Forward	9	4 / 4 / 7	
Aft	17	9 / 9 / 12	
HAULING POWER (TONS)	1,000	40 / 40 / 100	
MEAN RISE AND FALL OF TIDE (FEET)	6	5.2	
CRANE SERVICE	One 60-ton and one 35-ton, diesel, crawler cranes, each with 60-foot boom; one 20-ton diesel mobile crane with 50-foot telescopic boom; and one 10-ton floating crane with 40-foot boom.	Rental cranes available as required.	
UTILITIES AVAILABLE	Water, compressed air, A.C., 110/208/220/440 volts, and D.C., 110/208 volts.	Water, compressed air, A.C., 110/220/440 volts, and D.C., 115 volts.	
LARGEST VESSEL HANDLED (FEET)	200 by 38	55 by 15 / 50 by 15 / 90 by22	
DATE BUILT AND/OR REBUILT	1967/-	1950/1970 / 1956/- / 1957/1968	
REMARKS	-	Two parallel, timber finger piers flank center 20-ton (No. 2) railway. In addition to the marine railways plant also operates one 150- (under construction), one 30-, and one 20-ton, diesel, mobile vertical boat lift.	

VERTICAL BOAT LIFTS

REF. NO. OF NEAREST PIER OR WHARF	14	20	53 and 54
OWNED BY	Town Creek Boat Yard, Inc.	Seahol Contracting Co.	Mt. Pleasant Boat Building Co., Inc.
OPERATED BY	do.	do.	do.
ADDRESS	Foot of Charlotte Street Charleston, SC 29403	50 Immigration Street Charleston, SC 29402	P.O. Box 180 Mt. Pleasant, SC 29464
LOCATION ON WATERFRONT	Right bank of Cooper River (Town Creek) at foot of Charlotte Street.	Right bank of Cooper River (Town Creek) above Silas N. Pearman-Grace Memorial Highway Bridges.	Mt. Pleasant, left bank of Shem Creek approximately 900 feet above mouth.
TYPE	Mobile, gasoline, hydraulically-operated, rubber tire lift with slings.	Traveling, diesel-hydraulic, rail-mounted lift.	Mobile rubber tire lifts with slings.
DIMENSIONS:			Lower / Center / Upper
Vessel length	48	61.5	32 / 40 / 50
Vessel beam	15	31.1	100 / 11 / 16
Slip		180 by 35	50 by 36 / 50 by 15 / 100 by 17
Depth at M.H.W.	8	15	9 / 7 / 7
LIFT (TONS)	30	400	150 / 20 / 30
MEAN RISE AND FALL OF TIDE (FEET)	5.2	5.2	5.2
CRANE SERVICE	Rental equipment available as required.	One 25-ton, diesel, mobile crane with 90-foot boom, and three 5-ton, electric, mobile cranes, each with 25-foot boom.	Rental cranes available as required.
UTILITIES AVAILABLE	Water, compressed air, and A.C., 110 volts.	Water, compressed air, and A.C., 110/220 volts.	Water, compressed air, A.C., 110 volts, D.C., 115 volts.
LARGEST VESSEL HANDLED (FEET)	-	-	-
DATE BUILT AND/OR REBUILT	-	-	-
REMARKS	-	-	At time of survey the 150-ton lift was under construction. In addition to the vertical boat lifts, plant also operates one 100- and two 40-ton marine railways.

INDEX OF PIERS, WHARVES, AND DOCKS
FOR THE PORT OF CHARLESTON, SC

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*South Terminal Wharf	27	26
American Petrofina Company of Texas		
Wharf	28	27
Amoco Chemicals Corporation		
Barge Slip	43	32
Tanker Wharf	44	32
Atlantic Wood Products Co., Inc., Wharf	42	31
Braswell Shipyards, Inc.		
Salmons Dredging Wharf	24	25
Wharf	5	19
Cape Romain Contractors, Inc., Pier	45	32
Carolina Dredging Co., Inc., Wharf	2	18
Charleston Branch Pilots Association		
Adgers South Wharf	9	20
Chem-Marine Corporation, Wharf	29	27
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General Dynamics Corporation, Barge Slip	39	30
Gray Line Water Tours, Wharf	8	20
Gulf Oil Co.-U.S., Division of Gulf Oil Corp., Wharf	23	25
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MACALLOY Corporation, Wharf	26	26
Magwood, C. A. & Son, Inc., Wharf	52	35
Magwood, R. E., Wharf	60	37
Marathon Oil Co., Inc., Wharf	32	28
Marine Contracting & Towing Co., Wharf	19	24
Merritt Dredging Co., Piers and Mooring	3	18
Mt. Pleasant Boat Building Co., Inc.		
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Salmons Dredging Corp.		
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Sandblasters, Inc.		
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Moultrie Fisheries Wharf	57	36
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South Carolina State Ports Authority		
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Del Monte Banana Co. Pier	13	22
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Mt. Pleasant Seafood Co. Wharf	58	37
Town Creek Boat Yard, Inc., Pier	14	22
Tri-County Ice and Fuel Co., Inc., Dock	51	34
Union Carbide Corp.		
*Pier	25	26
United Brands Co.		
State Pier 9, Banana Pier	18	23
United States Government		
U.S. Coast Guard Base, Lower Wharf	7	20
U.S. Coast Guard Base, Upper Wharf	6	19
Wando Shrimp Co.		
Thelning Wharf	50	34
Westvaco Corp.		
*Barge Wharf	34	29
Kraft Division Wharf	35	29
White Stack Towing and Transportation Co.		
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*Not operated/not used

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THE PORT OF GEORGETOWN, SC

PORT AND HARBOR CONDITIONS

LOCATION AND GENERAL DESCRIPTION

The Port of Georgetown, South Carolina, is located along the north bank at the mouth of the Sampit River, which empties into the head of Winyah Bay from the northwest. The port is about 14 nautical miles from the Atlantic Ocean, 79 nautical miles northeast of Charleston, South Carolina, and 108 nautical miles southwest of Wilmington, North Carolina.

Winyah Bay extends about 16 miles from the ocean to the confluence of the Pee Dee and Waccamaw Rivers at its head near Georgetown, South Carolina. The bay's width is 0.75 mile at the entrance between North and South Islands, 4.5 miles in the middle section where it widens into a shallow expanse known as Mud Bay, and 1.25 miles in the upper section. The deepwater approach to the port is via a dredged channel leading from the ocean through Winyah Bay and Sampit River to a turning basin at the western end of the harbor.

Waterfront facilities for deep-draft vessels are along the north side of the turning basin and at the head of the Sampit River side channel between foot of Meeting and Wood Streets; facilities for fishing boats, recreational craft, and barges are along the left bank of the Sampit River between the foot of Meeting and Orange Streets, a distance of about 0.8 mile. The principal waterborne commodities handled at the port are pulpwood, paper, steel, and petroleum products.

The route of the Atlantic Intracoastal Waterway passes through Winyah Bay, entering the bay from the north by the way of the Waccamaw River and running southward through Western Channel and the Estherville-Minim Creek Canal.

HARBOR AND CHANNEL IMPROVEMENTS BY THE UNITED STATES

The existing project, authorized by the River and Harbor Acts of August 5, 1886, June 25, 1910, March 2, 1945, and June 30, 1948, provides for:

> A channel 27 feet deep from that depth in the Atlantic Ocean to and including a turning basin in Sampit River; 600 feet wide across the outer bar and part way into the gorge, thence 400 feet wide to a turning basin at the head of the project via a cutoff across the peninsula in Sampit River, a total distance of 17.9 miles, with a side channel 2,400 feet long and not less than 200 feet wide leading to a turning basin at the upper end of the built-up portion of the city waterfront, widened at the bends, to be secured and maintained by 2 entrance jetties of stone on brush mattresses extending from North and South Islands. The north jetty has a length of 11,139 feet and the south jetty, 21,051 feet. The project also provides for continued maintenance to a depth of 18 feet for a width of 400 feet of the bypassed portion of Sampit River opposite the city of Georgetown.

The project is completed and local cooperation has been fully complied with.

The channel controlling depths and project dimensions are given in the table on page 57.

TIDAL RANGE AND CURRENTS

The mean range of tide on the bar off the end of the south jetty is 4.6 feet; in the channel off Georgetown Light is 3.8 feet; and at Georgetown, 3.3 feet. The force and direction of the wind has marked influence on the range of the tide, continuing easterly winds bringing abnormally high tides and westerly winds much lower tides.

The tidal currents are greatest between the jetties, averaging 2 to 3 knots with a diagonal set across the south jetty. In the Winyah Bay channel, the tidal current averages

two knots with a stronger ebb current during freshets; and at the mouth of the Sampit River, the current averages about one knot.

ANCHORAGES

No specific areas in Georgetown harbor have been designated as anchorage grounds. Deep-draft vessels may anchor outside the entrance to Winyah Bay where good holding ground can be found 0.5 mile northward to northwestward of the sea buoy.

BRIDGES

No bridges cross the deep-draft channel from the turning basin to the ocean. A fixed, highway bridge (U.S. Highway 17) across the Sampit River at the upper side of the turning basin (upstream limit of Federal project) has a vertical clearance of 34 feet and a horizontal clearance of 100 feet at mean high water.

WEATHER CONDITIONS

The summers at Georgetown are warm and relatively humid beginning in May and extending well into September. The maximum temperatures average in the upper 80's, with minimums averaging in the low 70's during this period. Temperatures reach or exceed 90°F about 55 days, with a record high of 104°F. About half of the 50-inch annual rainfall occurs during these months.

Winters are usually mild with average daytime temperatures of 60°F, and nighttime temperatures in the upper 30's. Temperatures drop to freezing or below on an average of 28 days per year with a recorded low of 4°F registered in February. Snow is rare, and fog is prevalent in the spring and fall, usually burning off in the forenoon.

Statistical information concerning temperature conditions, precipitation, prevailing wind direction, and fog is not readily available for Georgetown. The weather conditions as presented under the Charleston, SC, section of this report are most nearly representative of those prevailing at Georgetown.

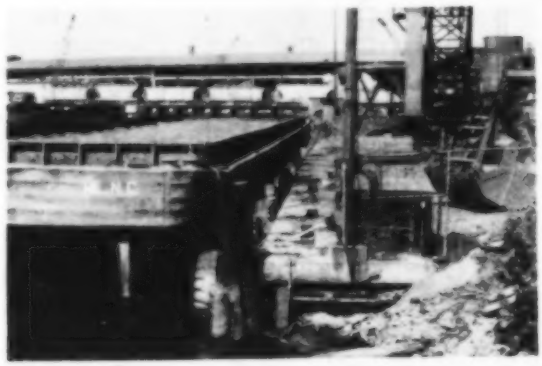
WINYAH BAY AND GEORGETOWN HARBOR

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOW WATER (MLW)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLW (FEET)
Entrance Channel	25.7	26.8	28.3	22.9	3-79	600	2.0	27
Range B	28.1	30.6	30.1	27.0	2-78	600	0.9	27
South Island Bend	28.7	28.8	29.7	16.4	3-79	600	1.2	27
Range C	28.1	30.4	28.6	13.7	2-78,1-79	400	1.4	27
Range D	27.5	28.2	27.5	27.3	1-79	400	1.5	27
Range E	25.0	28.1	28.4	27.3	1,7-78	300	4.8	27
Frazier Point Bend	28.3	28.1	28.4	26.0	7-78	300-750	1.0	27
Rabbit Island Channel	28.7	28.4	28.0	27.7	7-78	300	1.8	27
Sampit Point Channel		23.1	23.1		2-79	300	0.7	27
Turning Basin	24.0	27.4	27.2	23.6	8-78	400-600	0.55	27

Marine Industries, Inc., Tugboats
P.W.D. Ref. No. 2)

Exxon Co. Marina Dock
(P.W.D. Ref.No. 3)

Gulf Auto Marine Docks and Boat Basin Vertical
Boat Lift (P.W.D. Ref. No. 6)



Georgetown Ferreduction Wharf
(P.W.D. Ref. No. 9)

South Carolina State Ports Authority Pier No. 31
(P.W.D. Ref. No. 11)

International Paper Co. Lower Marine Railway
(P.W.D. Ref. No. 16)

THE PORT OF GEORGETOWN, SC

PORT AND HARBOR FACILITIES

PIERS, WHARVES, AND DOCKS

Eighteen piers, wharves, and docks are described in this report for the Port of Georgetown, South Carolina; all are located along the left bank of the Sampit River extending from the foot of Meeting Street to approximately 0.5 mile above the Highway Bridge (U.S. Highway 17) crossing the river. Each facility is described under a reference number in the table of Piers, Wharves, and Docks beginning on page 61. These reference numbers designate facility locations on the accompanying Port Facilities Map.

The South Carolina State Ports Authority owns and operates Pier No. 31 (P.W.D. Ref. No. 11) for handling general cargo in foreign and domestic trades. This wharf is of concrete construction, fronted by a timber fender system, and provides 500 feet of berthing space with a water depth of 28 feet alongside at mean low water (MLW). A concrete, transit shed on the wharf has 46,000 net square feet of space for long- or short-term storage of cargo as required. One surface track is located on the wharf apron, and one platform-level track extends along the rear of the transit shed; these tracks connect with the Seaboard Coast Line Railroad. Open storage space is also available for storing waterborne cargo not requiring protection from the weather.

The numerous waterfront facilities in the port used exclusively by recreational craft, and generally those docking facilities providing nonmaritime use are not included in this report.

The table on the following page summarizes the functional uses of the various piers, wharves, and docks at Georgetown. Some of these wharves are used for multiple purposes as indicated in the table; each can be identified by its respective P.W.D. reference number.

PURPOSE FOR WHICH USED

LOCATION	LEFT BANK, SAMPIT RIVER																	
P.W.D. REFERENCE NUMBERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Cargo handling:																		
Conventional general cargo.											•							
Charcoal										•								
Lumber											•							
Machinery/heavy equipment															•			
Ore (iron)									•	•								
Paper products											•		•					
Petroleum products												•						
Pulpwood																		•
Scrap metal										•								
Seafood				•	•			•										
Steel/steel products										•	•							
Stone														•				
Fueling small vessels			•		•	•												
Marine repair	•			•														
Drydocking	•			•														
Repairs to own equipment																•		
Icing fishing vessels					•													
Mooring:																		
Company-owned equipment																	•	
Fishing boats			•	•	•	•	•	•										
Harbor craft/tugs		•																
Under construction														•				

Corps of Engineers Port Code No. 12110

REFERENCE NUMBER ON MAP	1 Dock Code No. 004			2 Dock Code No. 009			3 Dock Code No. 020		
NAME	Hazzard's Marina.			Marine Industries Pier.			Exxon Co. Marina Dock.		
LOCATION ON WATERFRONT	Above foot of Meeting Street.			Approximately 175 feet above foot of Meeting Street.			Below foot of St. James Street.		
OWNED BY	James D. Hazzard.			James D. Hazzard.			W. T. Bellune.		
OPERATED BY	do.			Marine Industries, Inc.			Frank Ireland.		
PURPOSE FOR WHICH USED	Mooring recreational craft and fishing boats; mooring small craft for repair.			Mooring company-owned tugboats.			Fueling and mooring fishing boats, recreational craft, and other types of small vessels.		
TYPE OF CONSTRUCTION	Angular, timber pile, timber-decked pier with timber piles off upper side providing small boat berths.			Timber pile, timber-decked pier.			Timber bulkheaded slip; lower side continues as 50+50- by 9-foot, timber pile, timber-decked approach to timber pile, timber-decked, offshore wharf; upper side continues as 180- by 4-foot, timber pile, timber-decked pier; slip is 45 feet wide (See Remarks).		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Offshore wharf	Lower side of slip	Upper side of slip
Dimensions (Feet)	10	112+225	112+225	8	110	110	75 by 9	50+248	246
Depth Alongside at MLW Do.	8	0-6	0-6	9	3-9	3-9	8-12	8	8
Usable Berthing Space Do.	-	112+225	112+9 boat berths.	-	110	110	75, at face.	50+182	182
Width of Apron Do.	Open.			Open.			Open.	Open.	Open.
Height of Deck Above MLW Do.	9			9			9		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	None.			None.			None.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via Meeting Street, macadam, 18 feet wide, from Front Street, macadam, 30 feet wide.			Same as Ref. No. 1.			Via St. James Street, macadam, 24 feet wide, from Front Street, macadam, 50 feet wide.		
WATER SUPPLY (Available to Vessels)	Through one 3/4-inch line.			Same as Ref. No. 1.			Through 1½-inch line with 3/4-inch hose connections.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			Same as Ref. No. 1.			Same as Ref. No. 1.		
FIRE PROTECTION (Other than City)	Hand extinguishers and hose.			Same as Ref. No. 1.			Hand extinguishers.		
REMARKS	The city of Georgetown operates a small-boat launching ramp at foot of Meeting Street at inner end of lower side. A 50-ton marine railway located above inner end of upper side is leased to individuals making own boat repairs.			Pier used as base for harbor towboats "Kathy Ann II" and "Wal-Row"; dispatch office located in rear.			Additional 180 feet of berthing space available along upper side of pier; 75 feet along rear of face of wharf; and a total of 150 feet alongside a 75- by 7-foot floating pier extending from lower side of approach to wharf. Three metered pumps at face of wharf and one on approach; pumps are used for fueling purposes and connect with three 3-inch pipelines extending from 3 steel storage tanks in rear, total capacity 45,000 gallons.		

PIERS, WHARVES, AND DOCKS

Left bank, Sampit River

Corps of Engineers Port Code No. 12110

REFERENCE NUMBER ON MAP	4 Dock Code No. 023			5 Dock Code No. 032			6 Dock Code No. 042		
NAME	Cathou's Fish Pier.			Independent Seafood Co. Wharf.			Gulf Auto Marine Docks and Boat Basins.		
LOCATION ON WATERFRONT	Above foot of St. James Street.			Below foot of Cannon Street.			Below foot of Cannon Street to Screven Street.		
OWNED BY	E. Y. Cathou and Son.			H. Glennie Tarbox, Jr. and Mrs. H. G. Tarbox, Sr., and Marvin M. Thomas and Arthur E. Thomas			Samuel E. Miller, Jr.		
OPERATED BY	do.			do.			do.		
PURPOSE FOR WHICH USED	Receipt of seafood; mooring fishing boats and other types of small vessels; mooring small craft for repair.			Receipt of seafood; mooring, fueling, and icing fishing boats.			Fueling and mooring fishing boats, recreational craft, and other types of small vessels.		
TYPE OF CONSTRUCTION	Timber pile, timber-decked, wedge-shaped pier.			Timber pile, concrete-decked wharf with 3-foot catwalk fronted by timber mooring piles extending from lower and upper ends in line with face (See Remarks).			Three, timber pile, timber-decked wharves; and 2 timber bulkhead with solid fill boat basins. Lower basin: 100 by 40 feet; upper basin: 60 by 40 feet. Lower and center wharves extend outward from lower sides of basins. (Continued under Remarks).		
DESCRIPTION	Face	Lower side	Upper side	Face	Lower side	Upper side	Lower wharf	Center wharf	Upper wharf
Dimensions (Feet)	50	115	100	40	20	10	50 by 4	85 by 10	85 by 5
Depth Alongside at MLW Do.	10	0-10	0-10	10	-	-	7	12	8
Usable Berthing Space Do.	50	50	50	600 w/piles.	-	-	50	85	85
Width of Apron Do.	Open.			Open.			Open.	Open.	Open.
Height of Deck Above MLW Do.	7			8			6		
Load Capacity per Sq.Ft. (Lbs.)	-			-			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									
MECHANICAL HANDLING FACILITIES	None.			One electric hoist for handling seafood; ice blower on wharf with 5-inch hose for icing fishing boats, average rate 600 pounds per minute.			One 4-ton, electric, vertical boat lift located at inner end of upper basin.		
RAILWAY CONNECTIONS	None.			None.			None.		
HIGHWAY CONNECTIONS	Via St. James Street, macadam, 24 feet wide, from Front Street, macadam, 30 feet wide.			Via Cannon Street, macadam, 20 feet wide, from Front Street, macadam, 30 feet wide.			Via Queen Street, asphalt, varied widths, from Front Street, asphalt, 50 feet wide.		
WATER SUPPLY (Available to Vessels)	Through one 3/4-inch line.			Through two 2-inch lines with 3/4-inch hose connections.			Through ½- and 3/4-inch lines.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle.			A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			Same as Ref. No. 5.		
FIRE PROTECTION (Other than City)	Hand extinguishers.			Hose.			Hand extinguishers.		
REMARKS	Pier is 12 feet wide at shore end. One 30- and one 50-ton, marine railways located adjacent to shore end of lower side. Seafood-processing and -packing plant, 100 by 35 feet, located on shore in rear of pier.			Concrete block building at rear of wharf used as private warehouse. At time of survey, ice-making plant was under construction at rear of upper side on 50- by 36-foot timber platform and 115- by 12-foot timber approach. Upper Basin to inner end of approach to Wharves are offshore-type wharves, each with 75-foot timber approach. Center Wharf also has a total of 150 feet of additional berthing alongside a 75- by 8-foot timber pier extending from lower side of approach and parallel to wharf. Seven metered pumps on wharves for fueling purposes, connect with three 2-inch pipelines extending from 3 steel storage tanks, total capacity 18,500 gallons.			Berthing is available alongside boat basins with 7-foot depth of water; 75 feet in rear of face of Center Wharf; and along face of 270- by 4-foot, timber pile, timber-decked walkway and wharf extending from upper side of Upper Wharf. The Center and Upper		

Corps of Engineers Port Code No. 12110

REFERENCE NUMBER ON MAP	Dock Code Nos. 054, 059, 068, 070, 073, 074, 075, 077, 080, 081	8 Dock Code No. 108	9 Dock Code No. 113
NAME	Mooring Wharves.	Leonard and Sons Shrimp Co. Wharf.	Georgetown Ferroduction Wharf.
LOCATION ON WATERFRONT	In rear of stores facing Front Street, between foot of Screven and Orange Streets.	Below foot of Wood Street.	Above foot of Wood Street.
OWNED BY	Various owners (See Remarks).	James Doyle.	KORF Industries.
OPERATED BY	do.	Leonard and Sons Shrimp Co., Inc.	Georgetown Ferroduction Division, Georgetown Steel Corporation.
PURPOSE FOR WHICH USED	Mooring recreational craft, fishing boats, and other types of small vessels.	Receipt of seafood; mooring fishing boats.	Receipt of ore by barge.
TYPE OF CONSTRUCTION	Timber pile, timber-decked wharves in 3 sections.	Timber pile, timber-decked, offshore wharf, with 15- by 15-foot timber approach.	Steel sheet pile bulkhead with solid fill, fronted by timber fender system.
DESCRIPTION	Face	Face / Lower side / Upper side	Face
Dimensions (Feet)	160+110+325	90 / 10 / 10	400
Depth Alongside at MLW Do.	8	12 / - / -	12
Usable Berthing Space Do.	160+110+325	30 / - / -	400
Width of Apron Do.	4, 10, & 20	Open.	Open.
Height of Deck Above MLW Do.	6	6	6
Load Capacity per Sq.Ft. (Lbs.)	See Remarks.	-	Unlimited.
Lighted or Unlighted	Partly lighted.	Lighted.	Lighted.
TRANSIT SHEDS	None.	None.	None.
Number and Type of Construction			
Length and Width (Feet)			
Height Inside Do.			
Floor Area for Cargo (Sq.Ft.)			
Load Capacity per Sq.Ft. (Lbs.)			
Cargo Doors			
MECHANICAL HANDLING FACILITIES	None.	Electric mast-and-boom derrick with 10-foot boom.	Ryan-Walsh Stevedores: One 100-ton, diesel, crawler crane with 100-foot boom, equipped with 4-cubic yard clamshell bucket. Crane loads ore into steel hopper served by 30-inch, electric, inclined conveyor-belt system extending to ore storage area at rear.
RAILWAY CONNECTIONS	None.	None.	Surface tracks serving plant at rear connect with Seaboard Coast Line Railroad.
HIGHWAY CONNECTIONS	Via Screven or Orange Streets, each macadam, 30 feet wide, from Front Street, macadam, 50 feet wide.	Via Wood Street, macadam, 40 feet wide, from Front Street, macadam, 50 feet wide.	Via plant roads, various widths, from Front Street, macadam, 50 feet wide.
WATER SUPPLY (Available to Vessels)	None.	Through 3/4-inch line.	None.
ELECTRIC CURRENT (Available to Vessels)	None.	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.	None.
FIRE PROTECTION (Other than City)	None.	Hydrant, hose, hand extinguishers.	Hydrant and hand extinguishers.
REMARKS	Wharves owned and operated by: Nimmer and Arthur Joseph; M. P. Ferris; Norman Assey; Legare Hamilton; Ralph and W. P. Ford; C. L. Ford & Sons, Inc.; M. Karesh; Gertrude Meyer; Herbert and Phillip Meyer; Herbert Ringle; Helen Britt; Gurney Robinette; Rosalee Joseph; Phillip and Harold Schneider; City of Georgetown; Wallace Cottingham; Clara Prion; Helen, Julia, and Ritchie Rose; Louise Johnson; Hattie Witte; Marie St. Germaine; Abe Fogel; and National Bank of South Carolina, trustees. At time of survey, portions of wharves were in very poor condition.	Timber frame, metal-covered building in rear of face is used for retailing and processing seafood.	Storage area at rear for approximately 35,000 tons of ore. Ferreduction plant located at rear.

PIERS, WHARVES, AND DOCKS
Left bank, Sampit River

Corps of Engineers Port Code No. 12110

REFERENCE NUMBER ON MAP	10 Dock Code No. 130			11 Dock Code No. 212			12 Dock Code No. 230		
NAME	Pier No. 37.			Pier No. 31.			Pier No. 31, Tanker Berth.		
LOCATION ON WATERFRONT	Between foot of Emanuel and Butts Streets extended.			Approximately 0.4 mile below U.S. Highway No. 17 Bridge.			Approximately 0.3 mile below U. S. Highway No. 17 Bridge.		
OWNED BY	South Carolina State Ports Authority.			South Carolina State Ports Authority.			South Carolina State Ports Authority.		
OPERATED BY	Georgetown Steel Corp.			do.			Amerada Hess Corp.		
PURPOSE FOR WHICH USED	Receipt of scrap metal, ore and charcoal; shipment of steel reinforcing rods, wire, and billets.			Receipt and shipment of general cargo in foreign and domestic trades; receipt of lumber and steel; shipment of paper products.			Receipt of petroleum products.		
TYPE OF CONSTRUCTION	Prestressed concrete pile, concrete-decked, offshore wharf with a 100- by 21-foot, timber pile, concrete-decked approach ramp to each end; curved timber pile, timber deck rail trestle extends from shore to east side; concrete mooring dolphin on east side in line with face.			Concrete pile, concrete-decked wharf, with 100- by 40-foot approach to upper side; fronted by timber fender system. Curved, timber, rail trestle extends from shore to upper end of wharf apron.			Steel pile, concrete-decked, offshore wharf with 30- by 4-foot, timber pile, timber-decked approach; 2 steel pile, concrete-decked, rectangular-shaped, breasting dolphins fronted by steel fenders in line with face.		
DESCRIPTION	Face	East side	West side	Face	East side	West side	Face	East side	West side
Dimensions (Feet)	600	50	50	500	222	40+162	92	32	32
Depth Alongside at MLW Do.	27	-	-	28	-	-	27	-	-
Usable Berthing Space Do.	712 w/dolph.	-	-	500	-	-	192 w/dolphs.	-	-
Width of Apron Do.	Open.			40 and open.			Open.		
Height of Deck Above MLW Do.	15			12			11		
Load Capacity per Sq.Ft. (Lbs.)	1,000			600			-		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			One - concrete, with concrete floor.			None.		
Number and Type of Construction									
Length and Width (Feet)				378 by 162					
Height Inside Do.				20					
Floor Area for Cargo (Sq.Ft.)				46,000					
Load Capacity per Sq.Ft. (Lbs.)				600					
Cargo Doors (Feet)				Shipside: Five, 20 by 16; rear: four, 20 by 16 along covered, rail-loading platform and three, 20 by 16; serve recessed, covered, truck dock.					
MECHANICAL HANDLING FACILITIES	One 90-ton, electric, full-portal, gantry crane with 90-foot boom and 12-foot jib extension; equipped with 12-cubic yard, clamshell buckets and 80-inch electromagnets.			One diesel, 12½-, two gasoline, 5-, and four gasoline or LP-gas, 3- to 4-ton fork lift trucks equipped with paper roll clamps as required. Stevedore equipment available as required (See Remarks).			None.		
RAILWAY CONNECTIONS	Two surface tracks on wharf will join additional plant trackage in rear; connect with Seaboard Coast Line Railroad.			One 500-foot surface track on wharf apron, and one 300-foot, platform-level track along rear of transit shed; connect with Seaboard Coast Line Railroad.			None.		
HIGHWAY CONNECTIONS	Via plant roads, various widths, from Fraser Street (U.S. Highway 17), macadam, 24 feet wide.			Via roads, 24 feet wide, asphalt, from Fraser Street (U.S. Highway 17), macadam, 24 feet wide.			Same as Ref. No. 11.		
WATER SUPPLY (Available to Vessels)	Through one 8-inch line with 2½-inch hose connections.			Through one 6-inch line with 2½-inch hose connections.			Same as Ref. No. 11.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 440 volts, 3-phase, 60-cycle.			None.			A.C., 110 volts, single-phase, 60-cycle.		
FIRE PROTECTION (Other than City)	Hydrant and hose.			Sprinkler system inside transit shed, hydrants, hose, and hand extinguishers.			Hydrant and hose.		
REMARKS	Storage area at rear for approximately 35,000 tons of scrap.			Additional mobile equipment available from South Carolina State Ports Authority facilities in Charleston, S. C., including one 60- and one 40-ton, diesel, mobile cranes with boom lengths to 114 feet. Paved, 5-acre open storage area at rear.			One 12- and one 10-inch pipelines extend from wharf to 4 steel storage tanks located at terminal at rear, total capacity 198,000 barrels.		

Corps of Engineers Port Code No. 12110

REFERENCE NUMBER ON MAP	13 Dock Code No. 265	14 Dock Code No. 250	15 Dock Code No. 265
NAME	International Paper Co., Ship Dock.	W. F. Magann Corp. Wharf.	International Paper Co., Barge Transfer Bridge.
LOCATION OR WATERFRONT	Approximately 0.2 mile below U. S. Highway 17 Bridge.	Approximately 1,000 feet below U. S. Highway 17 Bridge.	Approximately 500 feet below U. S. Highway 17 Bridge.
OWNED BY	International Paper Co., Industrial Packaging Group.	W. F. Magann Corp.	International Paper Co., Wood Products Division.
OPERATED BY	do.	do.	do.
PURPOSE FOR WHICH USED	Shipment of paper products.	Shipment of quarry stone (See Remarks).	Handling equipment and supplies to and from barges for other company-owned plants.
TYPE OF CONSTRUCTION	Timber pile, timber-decked, offshore wharf with 3 approaches from transit shed in rear and one approach from shore.	Steel sheet pile bulkhead with solid fill fronted by timber fender system.	One hand-operated, adjustable, part steel and part timber transfer bridge; fronted by timber mooring dolphins.

DESCRIPTION	Face	East side	West side	Face	Lower side				
Dimensions (Feet)	475	34	34	190	25+30		Transfer bridge.		
Depth Alongside at MLW Ft.	27	-	-	10	-		6		
Usable Berthing Space Ft.	475	-	-	190 (See Remarks).			75 w/dolphs.		
Width of Apron Ft.	34			Open.			-		
Height of Deck Above MLW Ft.	10			10			-		
Load Capacity per Sq.Ft. (Lbs.)	500			-			-		
Lighted or Unlighted	Lighted.			Unlighted.			Unlighted.		
TRANSIT SHEDS	One, east, 340- by 110-foot portion: timber frame, metal-covered, wooden floor; west, 85- by 110-foot portion: steel frame, metal-covered, concrete floor.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)	325 by 110								
Height Inside Ft.	16								
Floor Area for Cargo (Sq.Ft.)	24,000								
Load Capacity per Sq.Ft. (Lbs.)	500								
Cargo Doors (Feet)	Shipside: Five, 10-by-8, one at inner end of each approach; rear: three, 12-by-10 and a 50-by-10 open area to truckloading platform.								
MECHANICAL HANDLING FACILITIES	LP-gas, 5-ton lift trucks equipped with forks and paper roll clamps. Additional stevedore equipment available as required.			Equipment available as required.			None.		
RAILWAY CONNECTIONS	None.			Surface track on apron connects with Seaboard Coast Line Railroad.			One surface track in rear of property connects with Seaboard Coast Line Railroad.		
HIGHWAY CONNECTIONS	Via roads, 34 feet wide, asphalt, from Fraser Street (U. S. Highway 17), macadam, 24 feet wide.			Same as Ref. No. 13.			Same as Ref. No. 13.		
WATER SUPPLY (Available to Vessels)	Through 2½-inch lines.			None.			None.		
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.			None.			None.		
FIRE PROTECTION (Other than City)	Plant fire department, 8-inch water line, hydrant, hose, and hand extinguishers.			None.			Plant fire department, hydrant, hose and hand extinguishers.		
REMARKS	Transit shed is located 30 feet in rear of wharf. Trucks have access to wharf apron and a truck station at tail-gate height adjacent to west approach.			At time of survey, facility was proposed to be constructed and operated as described. Two timber mooring dolphins, offshore on upper side, provide additional 80 feet of berthing space with 15 feet of water.			A 200- by 50-foot slip with steel sheet pile bulkhead, solid fill at head, located between transfer bridge and lower pier of Ref. No. 16.		

PIERS, WHARVES, AND DOCKS
Left bank, Sampit River

Corps of Engineers Port Code No.	12110	12117	
REFERENCE NUMBER ON MAP	16 Dock Code No. 267	17 Dock Code No. 024	18 Dock Code No. 034
NAME	International Paper Co., Marine Railway Piers.	International Paper Co., Lower Wharf.	International Paper Co., Upper Wharf.
LOCATION ON WATERFRONT	Approximately 350 feet below U. S. Highway 17 Bridge.	Approximately 0.3 mile above U. S. Highway 17 Bridge.	Approximately 0.5 mile above U. S. Highway 17 Bridge.
OWNED BY	International Paper Co., Wood Products Division.	International Paper Co., Industrial Packaging Group.	International Paper Co., Industrial Packaging Group.
OPERATED BY	do.	do.	do.
PURPOSE FOR WHICH USED	Mooring company-owned floating equipment for repair.	Mooring barges.	Receipt of pulpwood by barge.
TYPE OF CONSTRUCTION	Four parallel, timber pile, timber-decked piers. The 2 inner piers are 50 feet apart and extend from and in line with sides of a 100- by 50-foot steel sheet pile, solid-filled pier. Outer piers form marine railway slips, 40 feet wide, with sides of inner piers.	Timber pile, timber-decked wharf, fronted by timber mooring dolphins; additional berthing available along 4-foot walkway fronted by timber mooring dolphins extending from lower side. (See Remarks).	Steel, sheet pile bulkhead with solid fill; 270- by 4-foot catwalk extends from lower side and 880- by 4-foot catwalk from upper side; both timber construction, in line with face, and fronted by timber dolphins.

DESCRIPTION	Inner piers	Outer piers		Face	Lower side	Upper side	Face	East side	West side
Dimensions (Feet)	175 by 5,ea.	225 by 8,ea.		175	25	25	350+153	80	60
Depth Alongside at MLW Do.	0-12	0-12		10			10	-	-
Usable Berthing Space Do.	700,total.	450,total.		510 w/dolphs.			1,653 w/dolphs.		
Width of Apron Do.	Open.			Open.			Open.		
Height of Deck Above MLW Do.	10			10			10		
Load Capacity per Sq.Ft. (Lbs.)	250			-			250		
Lighted or Unlighted	Lighted.			Lighted.			Lighted.		
TRANSIT SHEDS	None.			None.			None.		
Number and Type of Construction									
Length and Width (Feet)									
Height Inside Do.									
Floor Area for Cargo (Sq.Ft.)									
Load Capacity per Sq.Ft. (Lbs.)									
Cargo Doors									

MECHANICAL HANDLING FACILITIES	None.	None.	One 50-ton, electric, traveling crane used for unloading pulpwood from barges into a floating, electric chain-conveyor extending 300 feet along face of wharf; the conveyor serves inclined conveyor and 2 flumes, extending to open storage area and papermill in rear.
RAILWAY CONNECTIONS	One surface track in rear of property connects with Seaboard Coast Line Railroad.	Plant trackage in rear connects with Seaboard Coast Line Railroad.	Same as Ref. No. 17.
HIGHWAY CONNECTIONS	Via roads, 24 feet wide, asphalt, from Fraser Street (U. S. Highway 17), macadam, 24 feet wide.	Via plant roads, from Kaminski or Fraser Streets, each paved.	Via plant roads, from Kaminski or Fraser Streets, each paved.
WATER SUPPLY (Available to Vessels)	Through 2½-inch lines.	None.	Through one 3/4-inch line.
ELECTRIC CURRENT (Available to Vessels)	A.C., 110 volts, single-phase, 60-cycle; A.C., 220 volts, 3-phase, 60-cycle.	None.	A.C., 110 volts, single-phase, 60-cycle; A.C., 220/440 volts, 3-phase, 60-cycle.
FIRE PROTECTION (Other than City)	Plant fire department, hydrant, hose, and hand extinguishers.	Same as Ref. No. 16.	Same as Ref. No. 16.
REMARKS	Approximately 450 feet of additional berthing available along row of mooring dolphins at outer end of piers. Office and work shop located on the 100- by 50-foot, solid-filled area at inner ends of the 2 inner piers. Two 95-ton marine railways are located in slips between inner and outer piers.	One 10-inch pipeline extends from walkway to 3 steel, fuel oil, storage tanks at papermill in rear, total capacity 90,000 barrels. At time of survey, pipeline was not being used and tanks were being supplied by a 12- to 10-inch pipeline extending from terminal described under Ref. No. 12. A 4-foot catwalk extends from upper side to catwalk and mooring piles serving adjacent Upper Wharf (Ref. No. 6). Additional 300 feet of mooring along row of timber dolphins fronting natural bank on lower side.	One 110- and one 80-foot, floating booms on lower and upper side, respectively, and back-up barge on outside of pulpwood barge being unloaded contains spillage during unloading operations. Storage at rear for approximately 60,000 cords of pulpwood.

OIL HANDLING AND BUNKERING

Only one of the waterfront facilities described in this report receives petroleum products. The Amerada Hess Corporation operates an offshore-type wharf (Pier No. 31, Tanker Berth - P.W.D. Ref. No. 12), owned by the South Carolina State Ports Authority. Two pipelines, one 12 inch and one 10 inch, extend from the wharf to 4 steel, storage tanks in rear; these tanks have a total capacity of 188,000 barrels.

Diesel fuel and marine lubricants are available to fishing boats, tugs, towboats, and other types of small vessels at three of the wharves described in this report.

OPEN STORAGE

The South Carolina State Ports Authority has five acres of paved storage area available to the public in rear of the transit shed on Pier No. 31 (P.W.D. Ref. No. 11).

WAREHOUSES

No public warehouses serve the waterfront at the port. A concrete transit shed on the South Carolina State Ports Authority's Pier No. 31 (P.W.D. Ref. No. 11) is available to the public for long-term storage or for transit storage of general cargo as required. The shed has a net total storage area of 46,000 square feet and is served by rail tracks and paved roads.

HOISTING FACILITIES - ASHORE AND AFLOAT

General cargo at the port usually is handled to and from vessels by ships' tackle. However, local, shore-based hoisting equipment is available to the public for making heavy lifts up to 90 tons. In addition, the South Carolina Ports Authority's Pier No. 31 (P.W.D. Ref. No. 11) can make arrangements for use of their 60- and 40-ton mobile cranes, with boom lengths to 114 feet, stationed in Charleston, SC.

Ryan-Walsh Stevedores, Inc., operates a 100-ton diesel, crawler crane with 100-foot boom at Georgetown Ferreduction Wharf (P.W.D. Ref. No. 9). At the South Carolina State Ports Authority's Pier No. 32 (P.W.D. Ref. No. 10), the Georgetown Steel Corp. operates a 90-ton, electric, traveling, full-portal, gantry crane with 90-foot boom and 12-foot jib extension. These cranes are used primarily for handling steel products and ore; however, by special arrangement they are available for making heavy lifts.

No floating cranes or derricks for making heavy lifts at shipside are based at the port.

MARINE REPAIR PLANTS AND DRYDOCKING FACILITIES

The nearest facilities for making major repairs or for drydocking large, deep-draft, oceangoing vessels are located at and are described under the Charleston, SC, section of this report.

Hazzards Marina owns and operates a marine railway above their pier (P.W.D. Ref. No. 1), which is available to the public to make their own boat repairs. The cradle is 30 feet long and 20 feet wide at the top of the blocks. The haul-out capacity is 50 tons, with depths over the keel blocks in outboard position of four feet forward and 7 feet aft. The railway is operated by an electric hauling winch and is served by water lines and electrical connections.

R. Y. Cathou and Son own and operate two marine railways in conjunction with their seafood business; these parallel railways are located at the inner end of the company's pier (P.W.D. Ref. No. 4). One has a cradle 30 feet long with keel blocks the full length and a width of 15 feet at top of the blocks; haul-out capacity is 30 tons. Depths over the keel blocks in outboard position are 2½ feet forward and 4½ feet aft at mean high water; the mean rise and fall of tide at this location is 4.7 feet. The other railway has a haul-out capacity of 50 tons and a cradle 45 feet long with keel blocks the full length and a width of 18 feet at top of the blocks. Depths over the keel blocks in outboard position are 4 feet forward and 9 feet aft at mean high water. Each railway is operated by electric hauling winches and is

served by water lines and electrical connections. Boats up to a length of 42 feet can be handled on the 30-ton railway and up to 65 feet on the 50-ton railway.

The International Paper Co. has two, identical, marine railways at its marine railway piers (P.W.D. Ref. No. 16) for maintaining and repairing company-owned floating equipment. In an emergency, these facilities are available to the public. The cradles are 104 feet long, with keel blocks the full length and a width of 16 feet at the top of the blocks. Each of the railways has a haul-out capacity of 95 tons and is operated by electric winches. Depths over the keel blocks in outboard position are 8.6 feet forward and 17.4 feet aft at mean high water. Barges up to 180 by 35 feet, and towboats up to 80 feet in length can be accommodated. Compressed air, water, and electricity are available at each of these railways.

FLOATING EQUIPMENT

Marine Industries, Inc. (P.W.D. Ref. No. 2) performs towing, docking, and undocking services for vessels at the Port of Georgetown. This firm owns and operates two, diesel-powered towboats--"Wal-Row" and "Kathy Ann II"--with ratings of 1,000 and 600 horsepower, respectively.

Additional information on floating equipment can be obtained from Transportation Series No. 5, titled "Transportation Lines on the Atlantic, Gulf, and Pacific Coasts."

This publication is described under "Floating Equipment" in the Charleston section of this report.

RAIL LINES

The Seaboard Coast Line Railroad serves the Port of Georgetown, SC.

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THE PORT OF GEORGETOWN, SC

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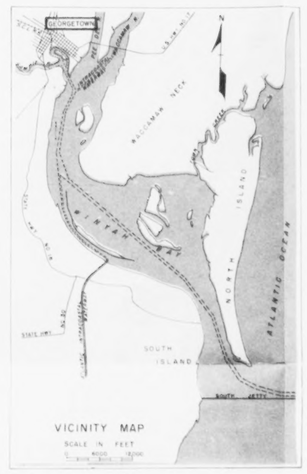
*Various operators

NOTE: Multiple operators and owners for P.W.D. Ref. No. 7 Mooring Wharves may be found on page 63.

* U. S. GOVERNMENT PRINTING OFFICE : 1980--629-563

GENERAL VIEW OF GEORGETOWN, SOUTH CAROLINA



LEGEND

- CUSTOMS
- CONVENTIONAL GENERAL CARGO
- PAPER PRODUCTS
- SCRAP METAL & STEEL PRODUCTS
- ORE
- LUMBER & PULPWOOD
- SEAFOOD
- MARINE REPAIR
- DRYDOCKING
- PETROLEUM PRODUCTS
- QUARRY STONE

PORT FACILITIES AT

GEORGETOWN, S.C.

WATER RESOURCES SUPPORT CENTER
U.S. ARMY CORPS OF ENGINEERS
KINGMAN BUILDING FORT BELVOIR, VA.

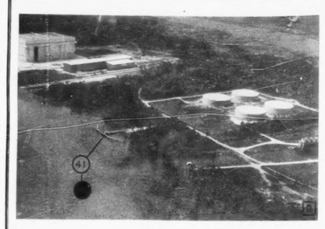
SCALE IN FEET
200 0 400 800

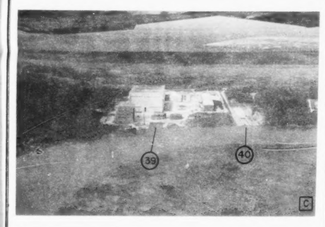
FIELD DATA BY
THOMAS C. WHALEN APRIL 1980

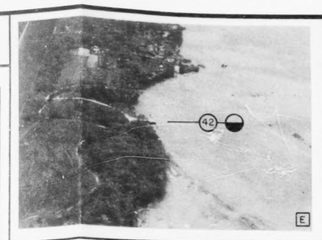
AERIALS FLOWN MARCH 1980

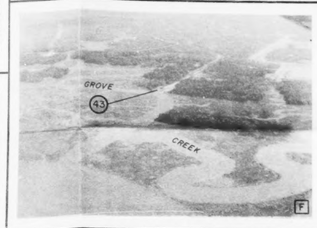
John W Vetter
CHIEF, PORT FACILITIES BRANCH

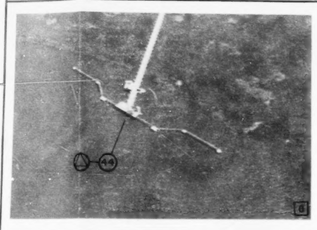
DRAFTING BY W.E. McC. SEPT. 1980

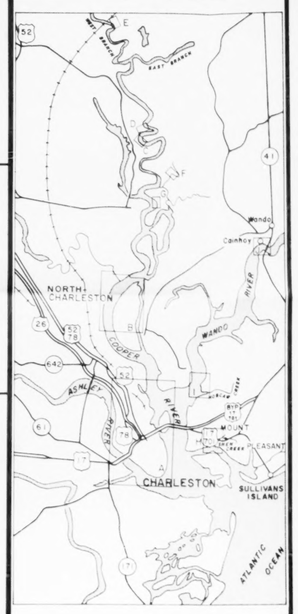






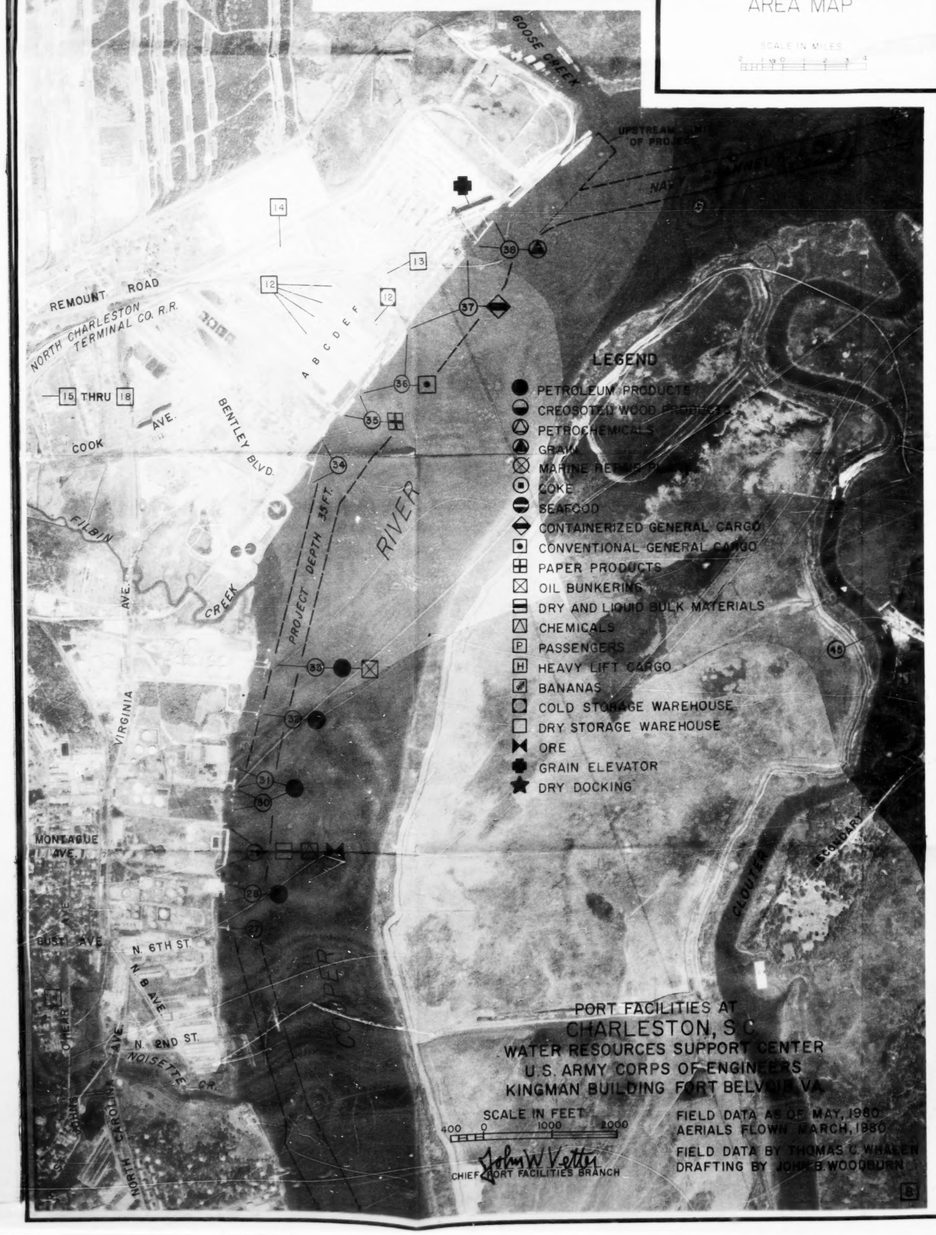






AREA MAP

SCALE IN MILES



PORT FACILITIES AT
CHARLESTON, S C
WATER RESOURCES SUPPORT CENTER
U.S. ARMY CORPS OF ENGINEERS
KINGMAN BUILDING FORT BELVOIR VA

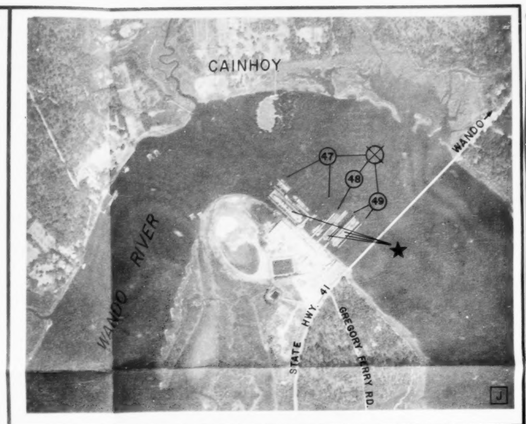
SCALE IN FEET
400 0 1000 2000

FIELD DATA AS OF MAY, 1980
AERIALS FLOWN MARCH, 1980
FIELD DATA BY THOMAS C. WHALEN
DRAFTING BY JOHN B. WOODBURN

John W. Vetter
CHIEF, PORT FACILITIES BRANCH

B

A



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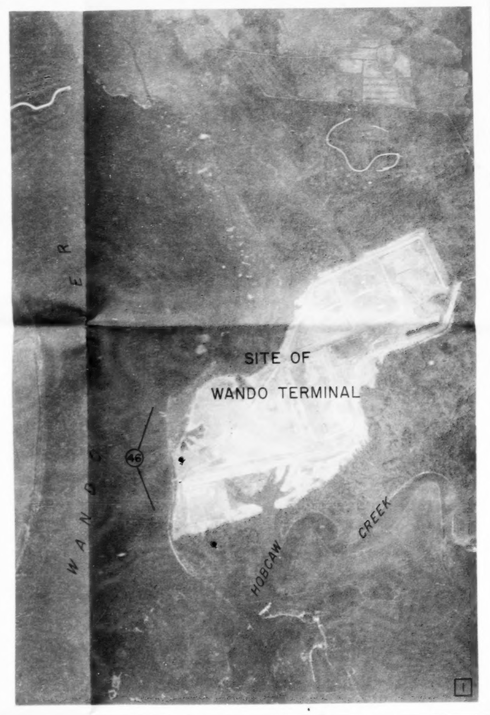

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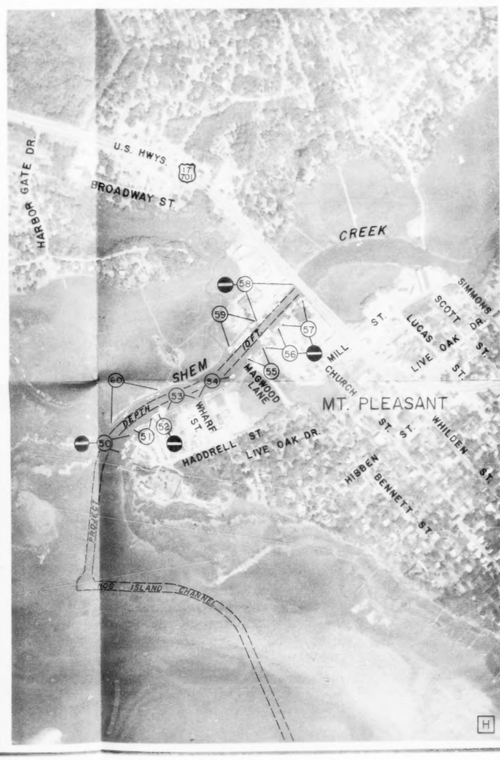

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